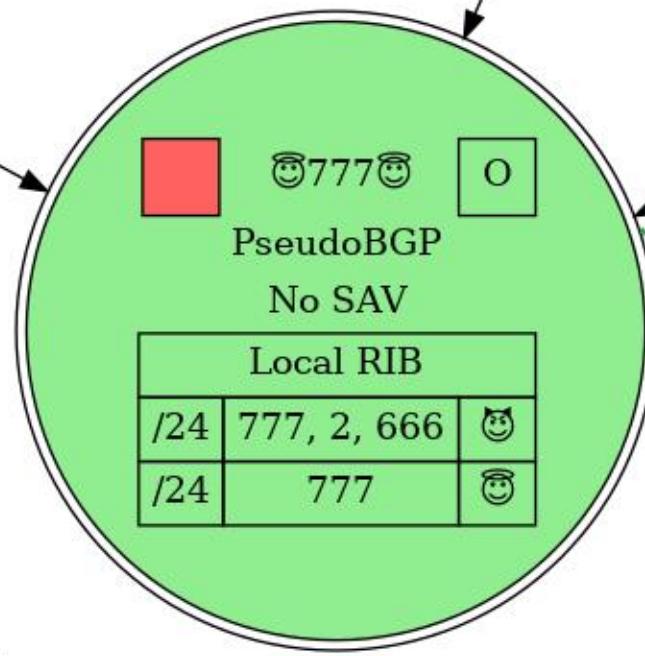
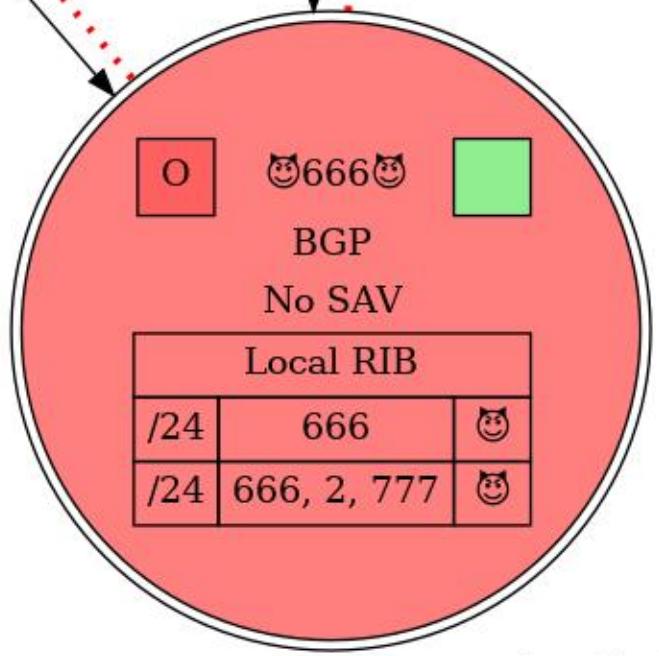
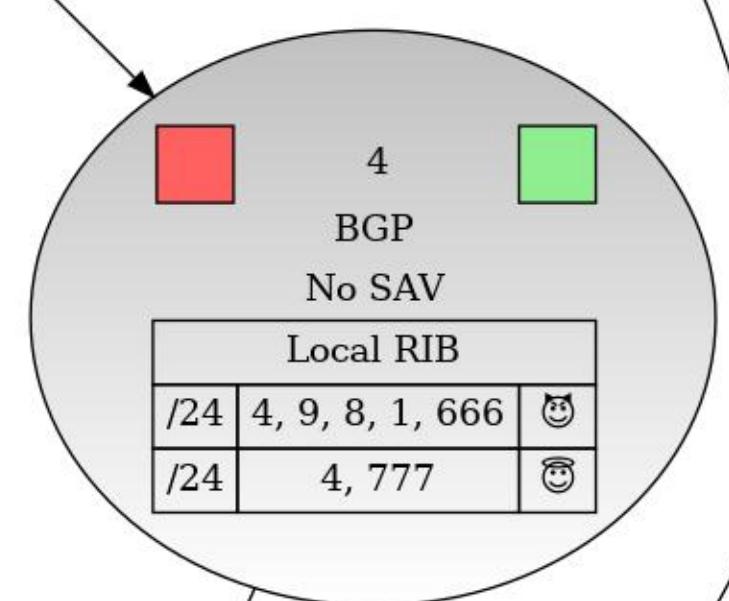
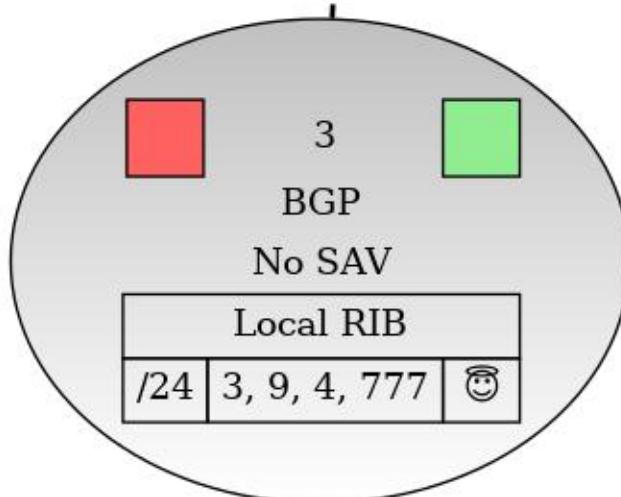
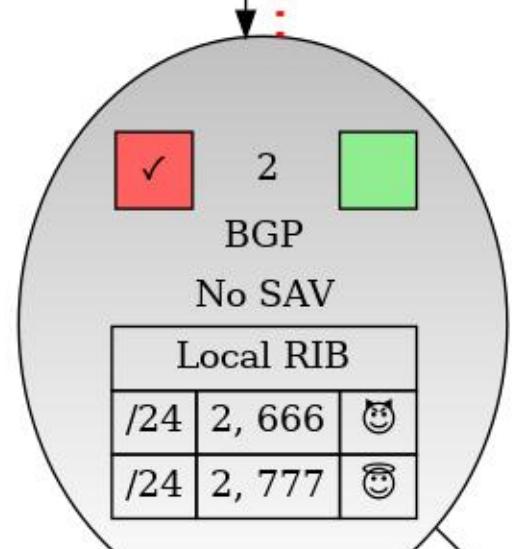
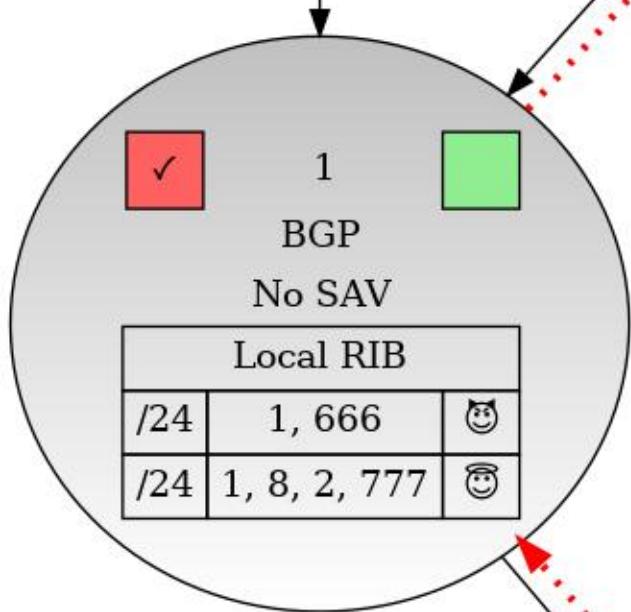
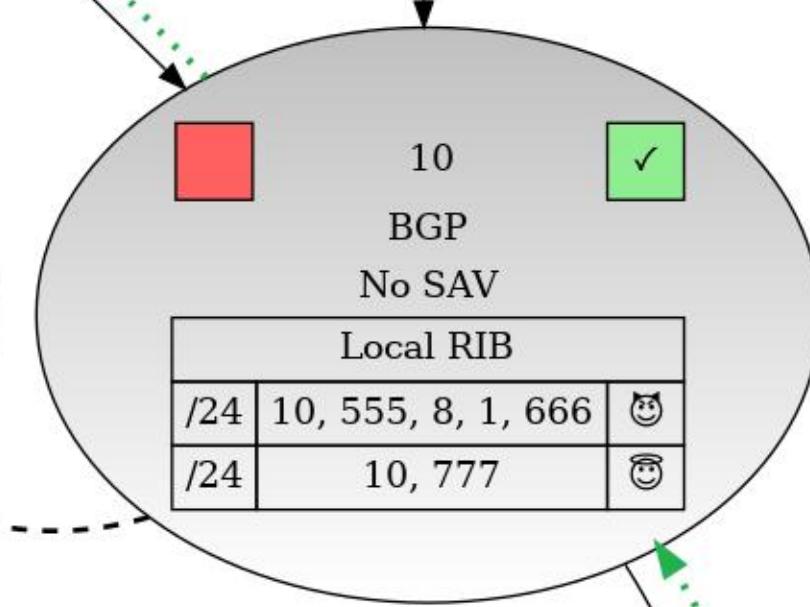
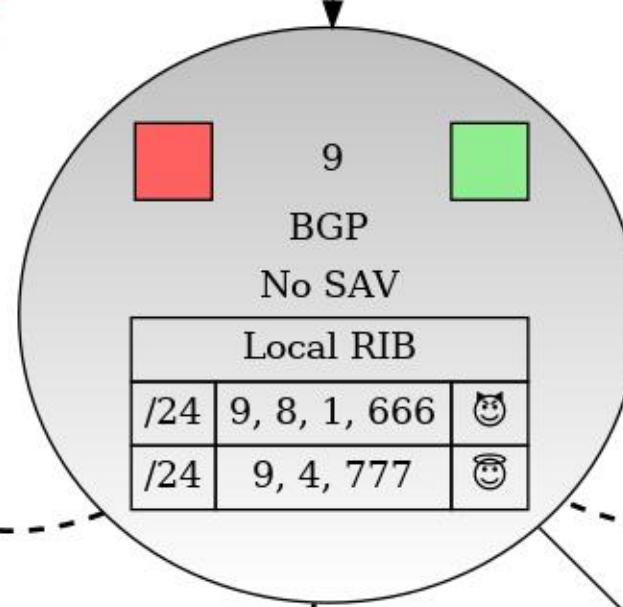
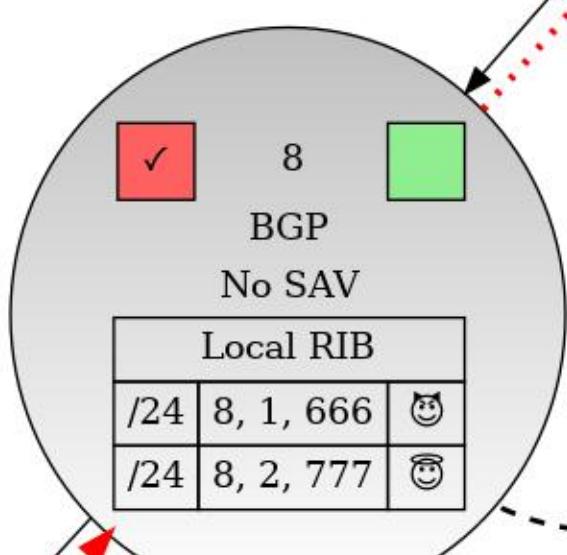
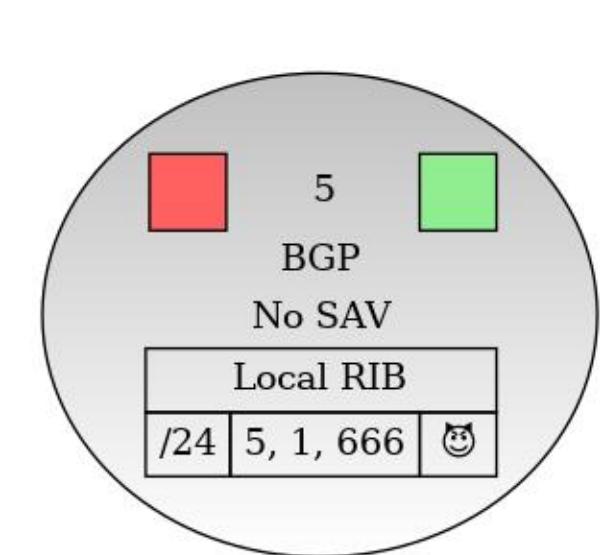
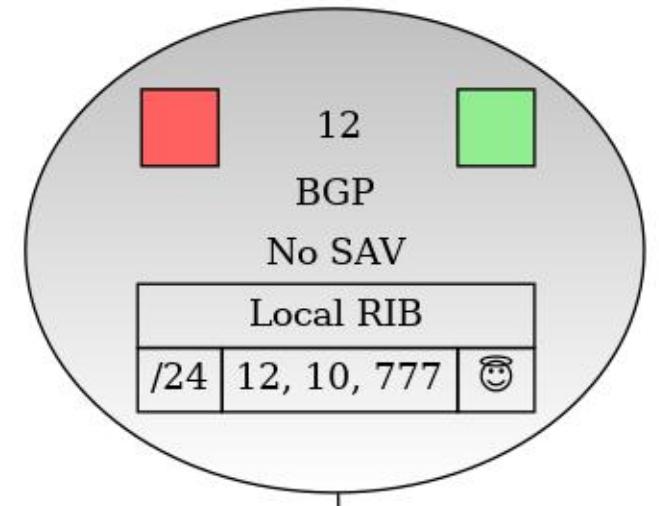
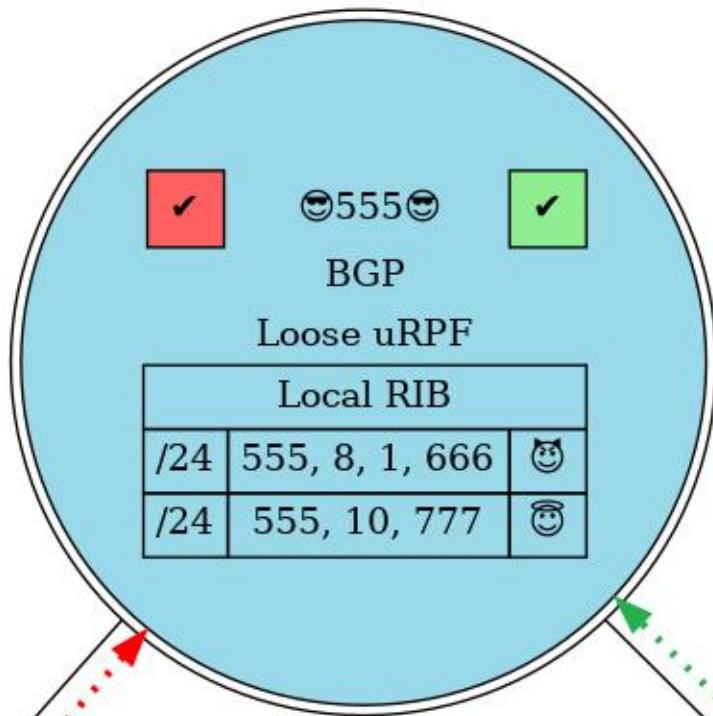


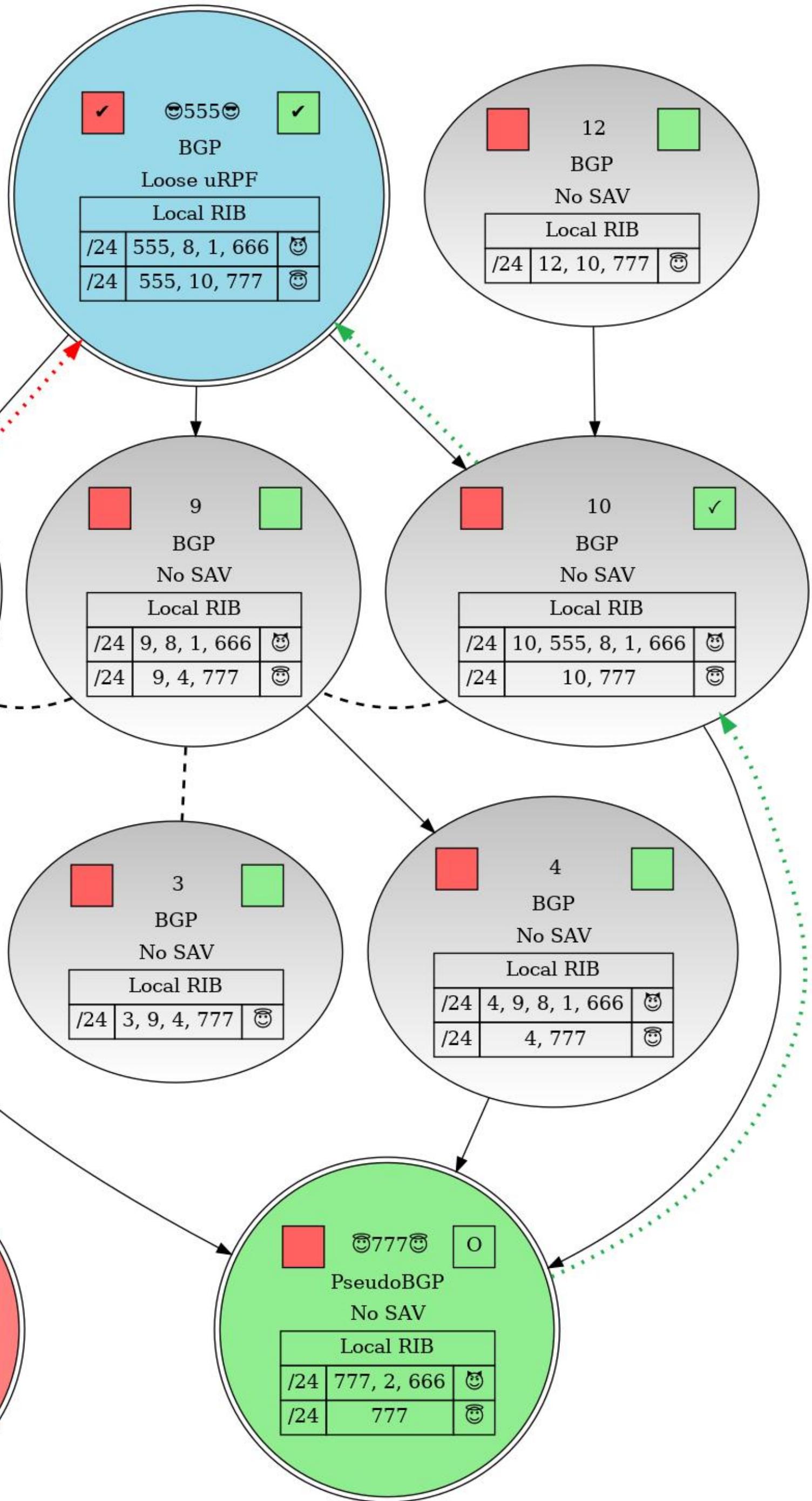
(Data Plane Outcomes)			
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_000 Ground Truth)  
Single reflector running Loose uRPF

**(Data Plane Outcomes)**

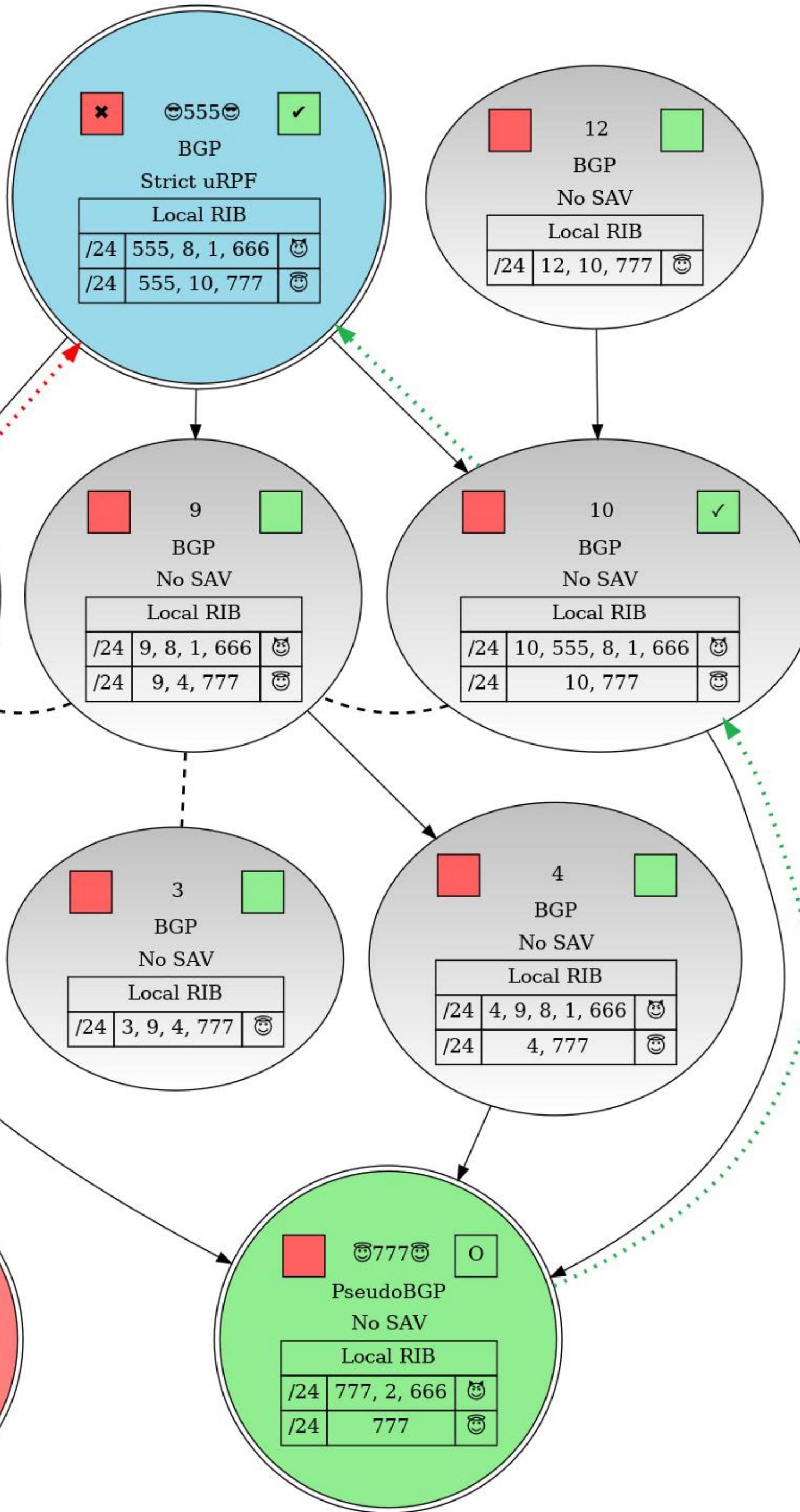
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_000)  
Single reflector running Loose uRPF

**(Data Plane Outcomes)**

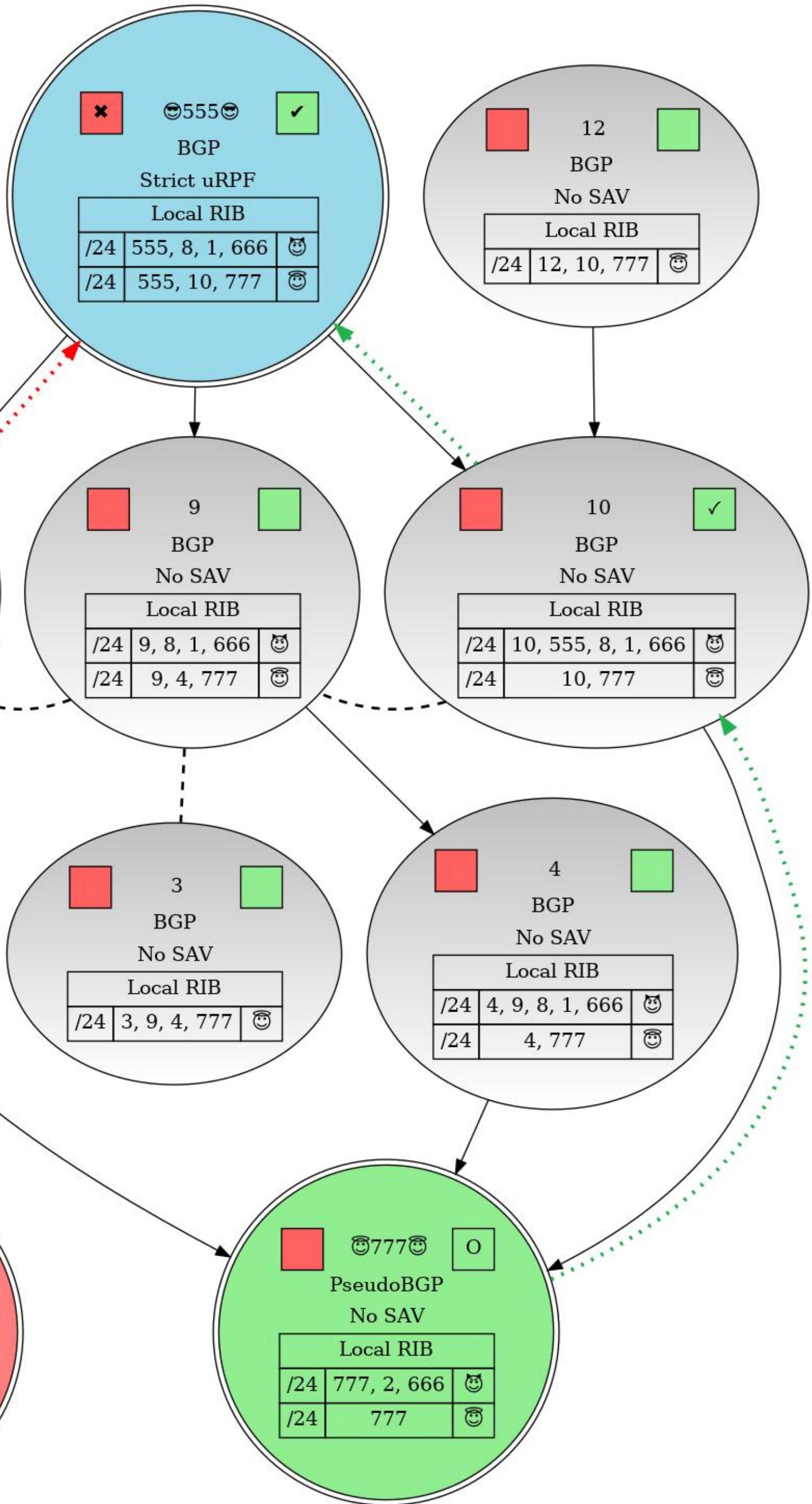
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_001 Ground Truth)  
Single reflector running Strict uRPF

**(Data Plane Outcomes)**

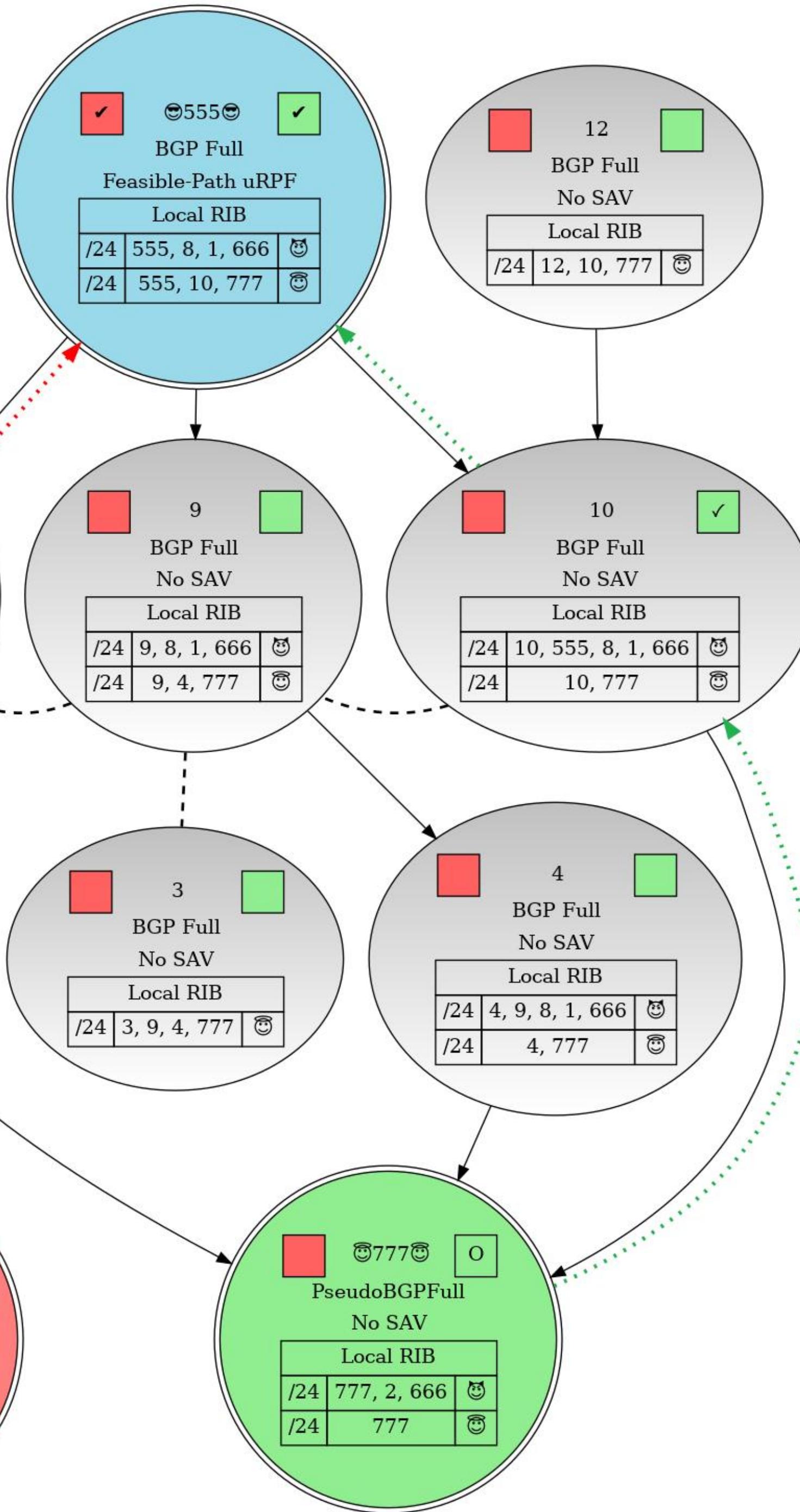
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_001)  
Single reflector running Strict uRPF

**(Data Plane Outcomes)**

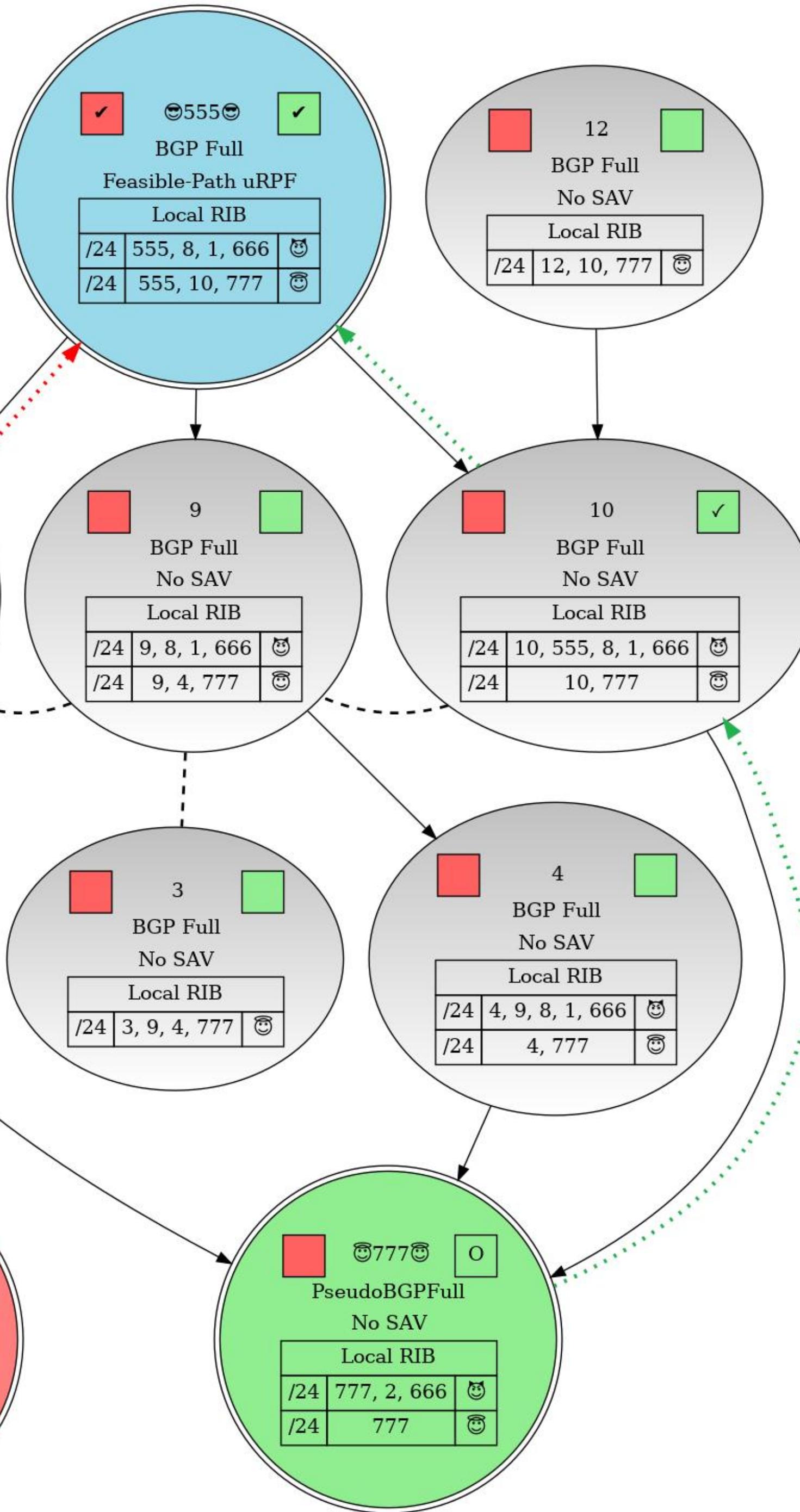
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_002 Ground Truth)  
Single reflector running Feasible Path uRPF

**(Data Plane Outcomes)**

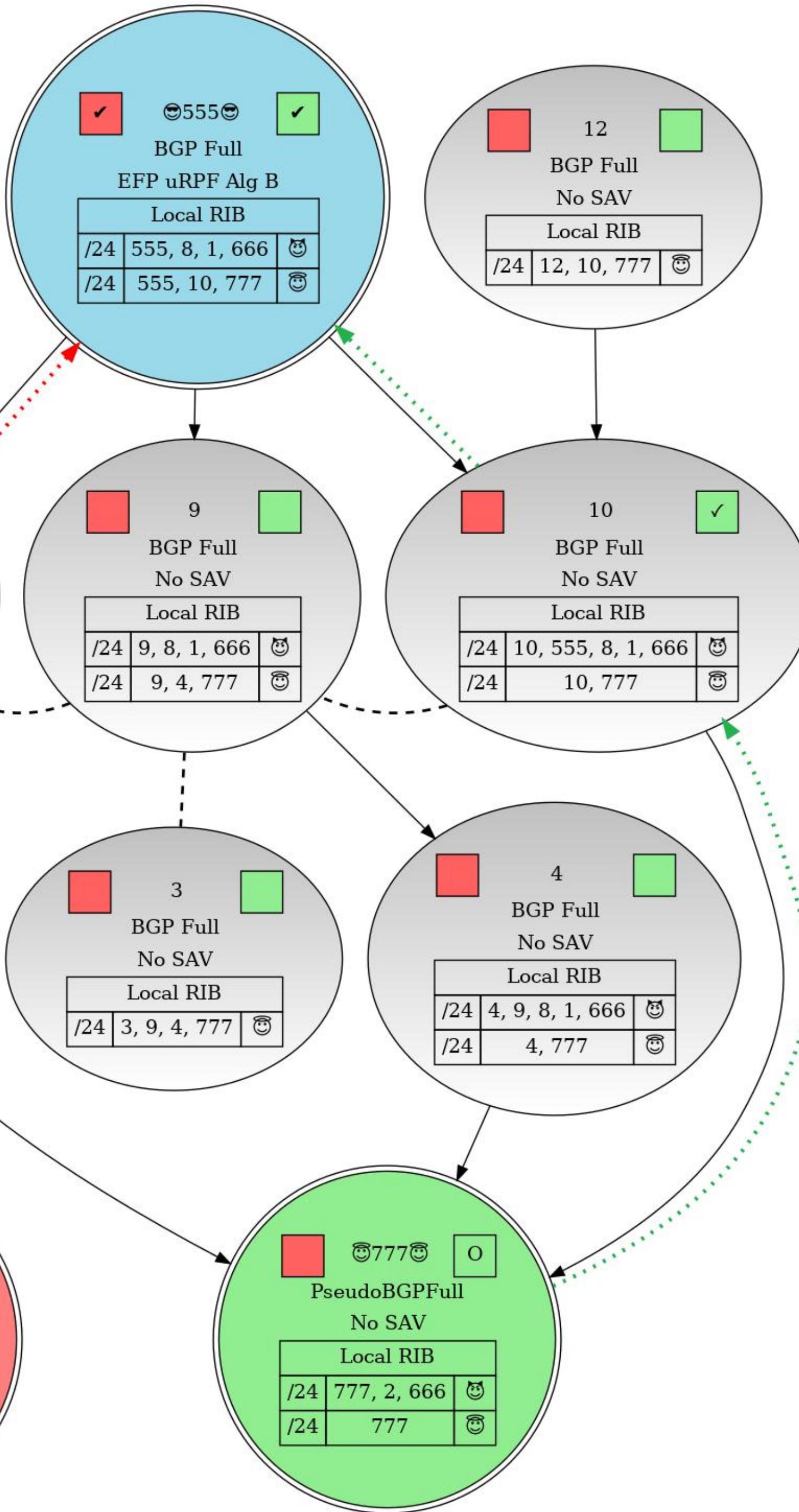
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_002)  
Single reflector running Feasible Path uRPF

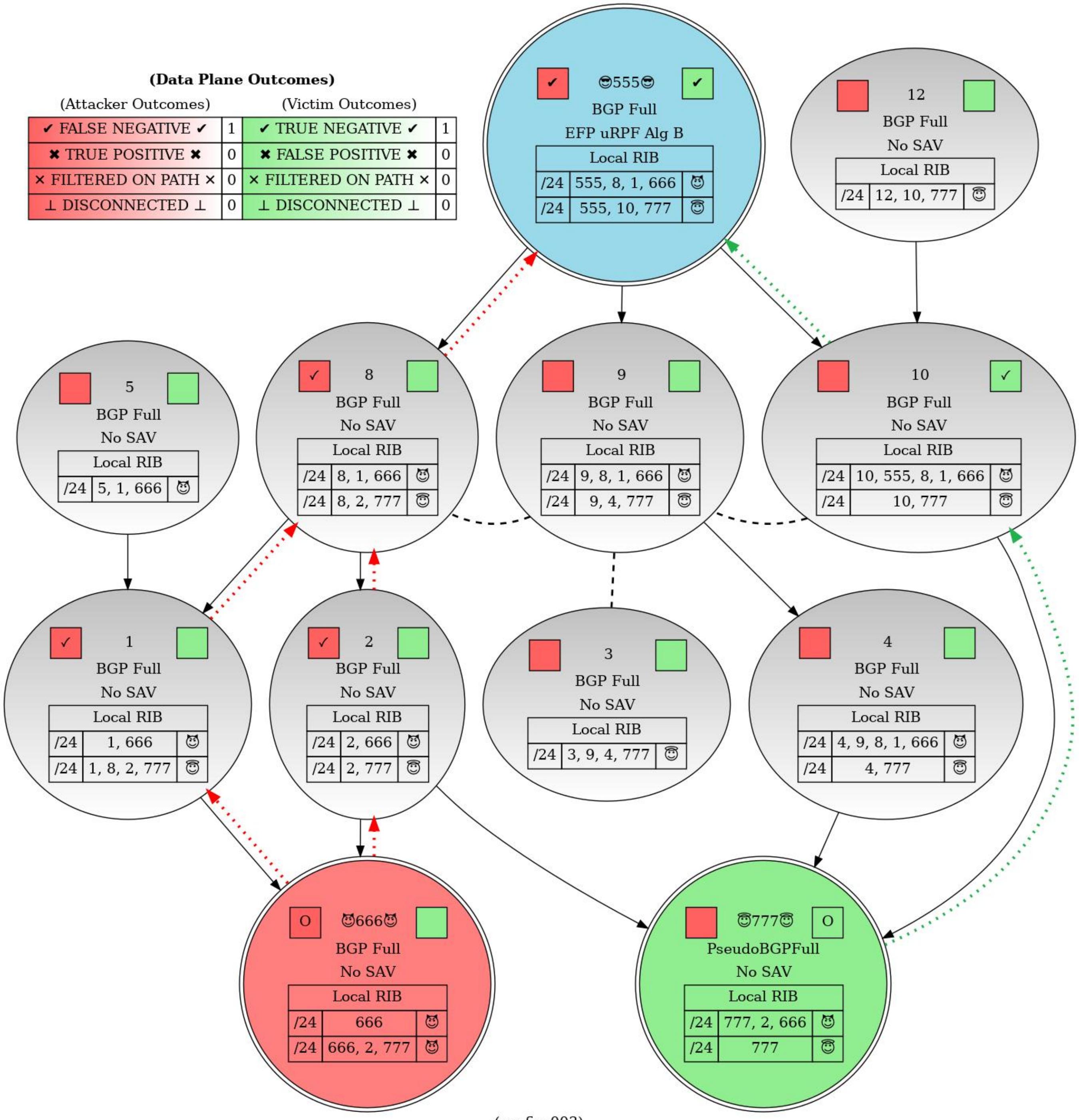
**(Data Plane Outcomes)**

(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



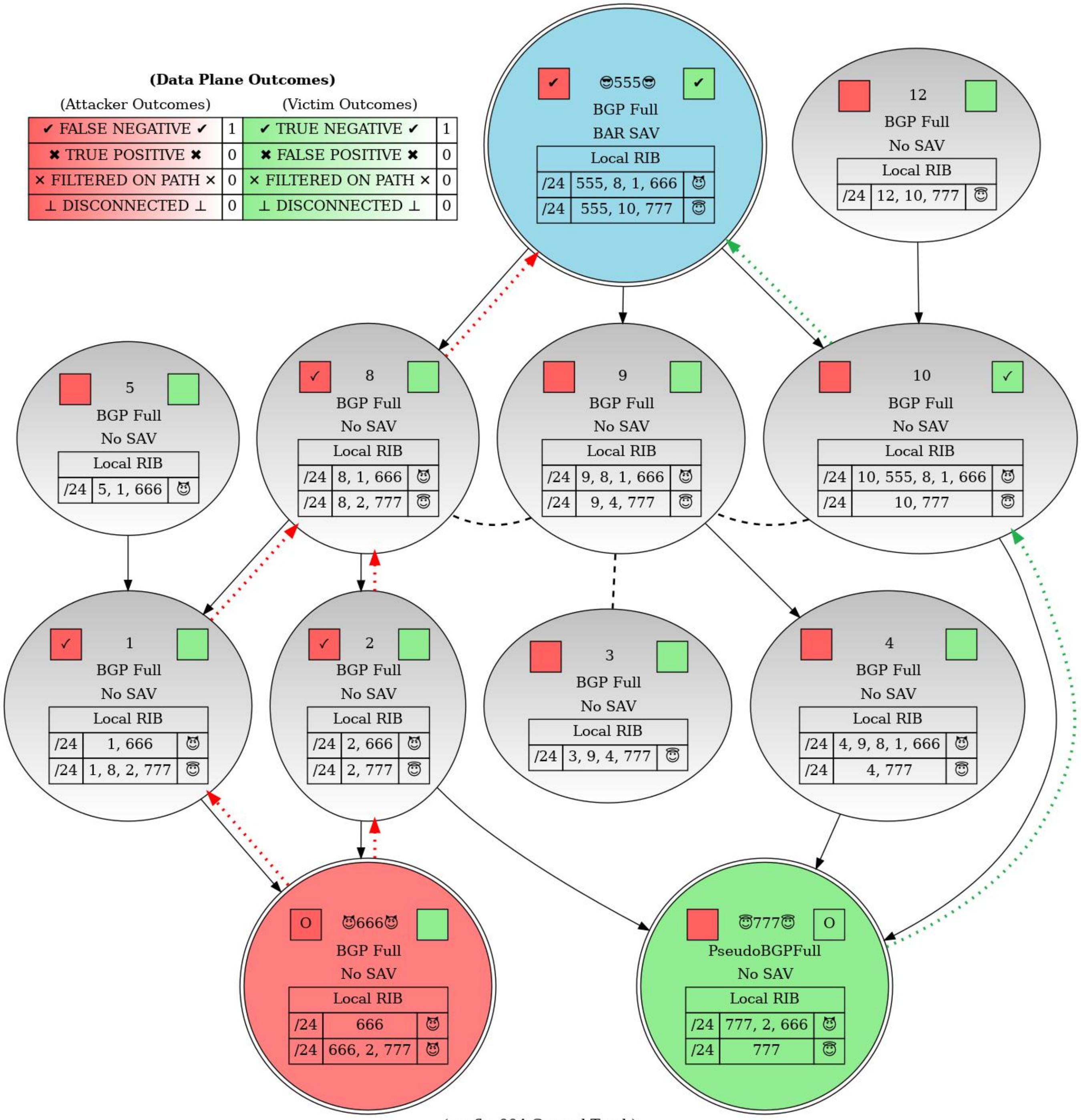
(config\_003 Ground Truth)  
Single reflector running EFP uRPF

<b>(Data Plane Outcomes)</b>			
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



**(Data Plane Outcomes)**

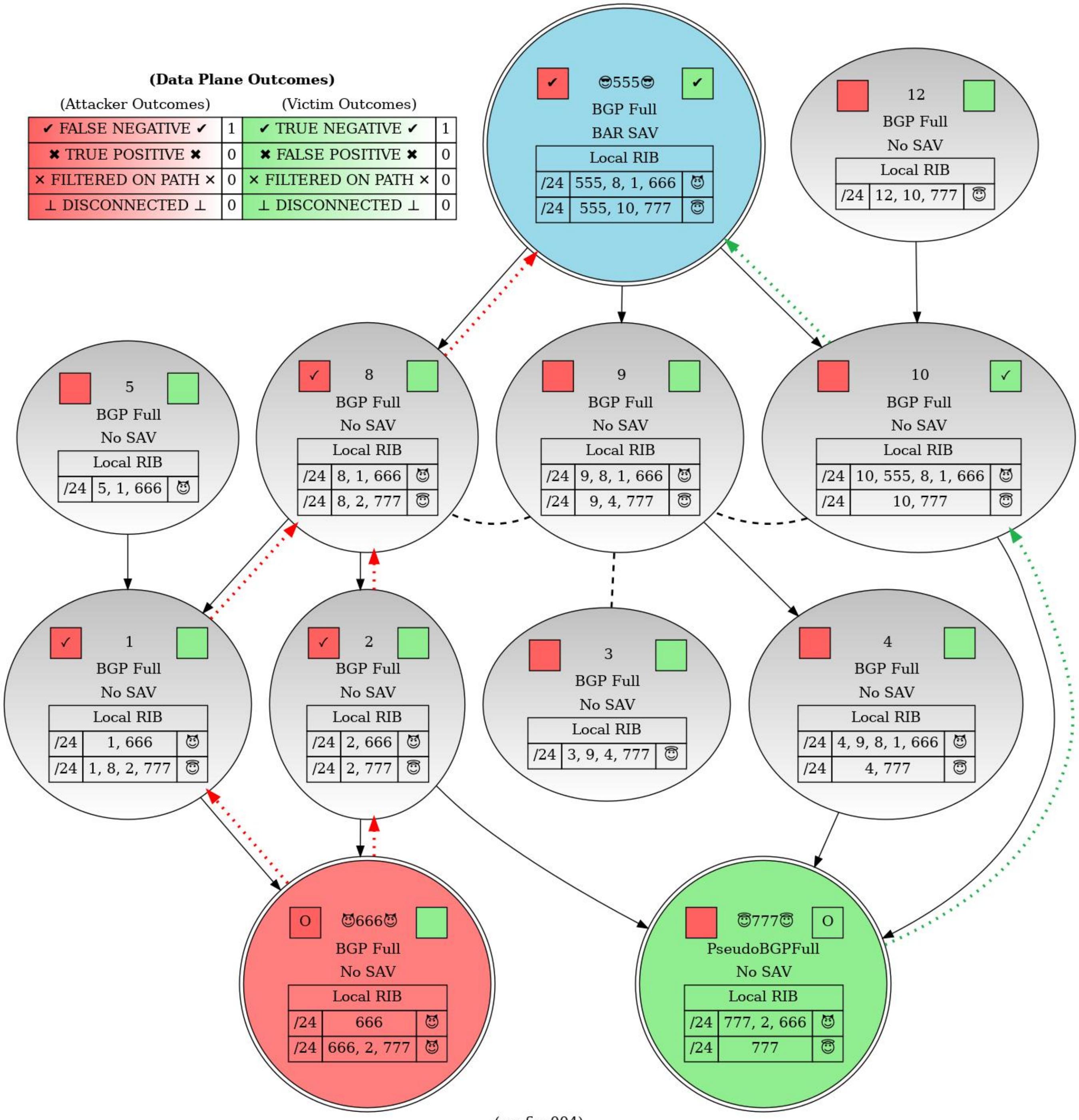
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_004 Ground Truth)  
Single reflector running BAR SAV

**(Data Plane Outcomes)**

(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



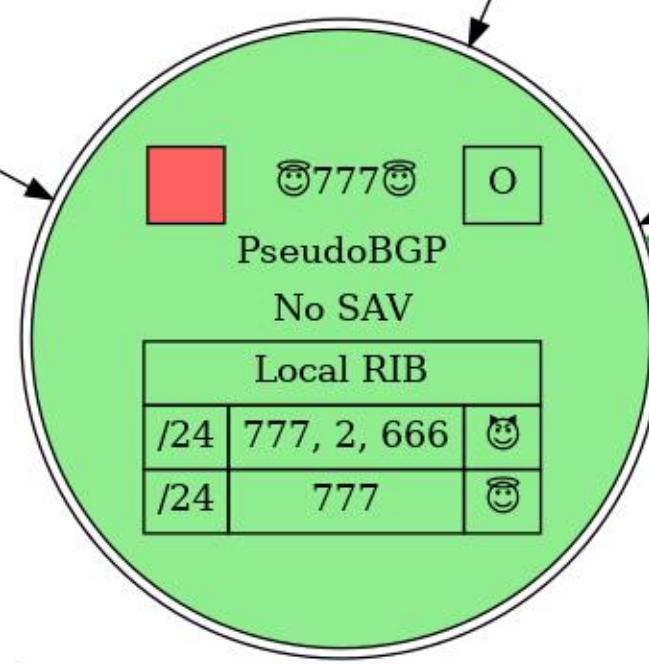
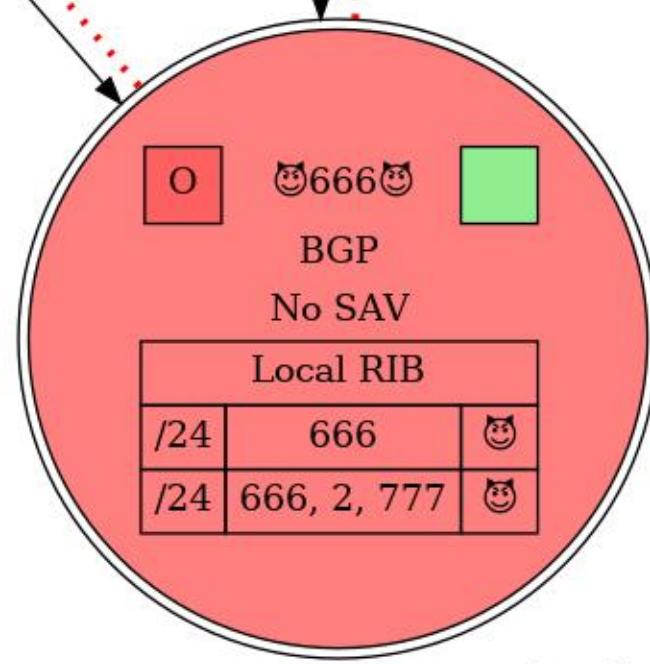
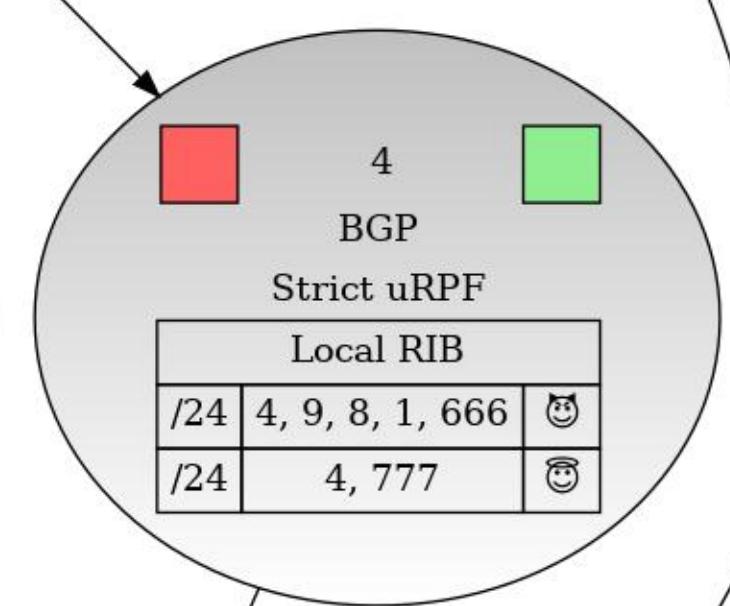
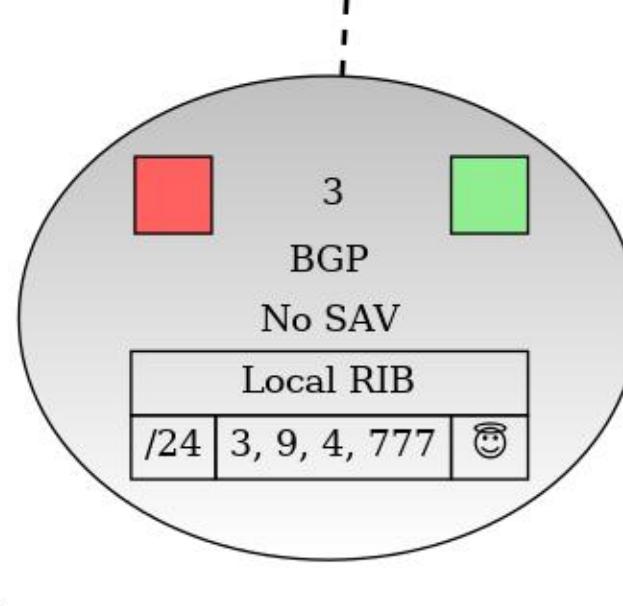
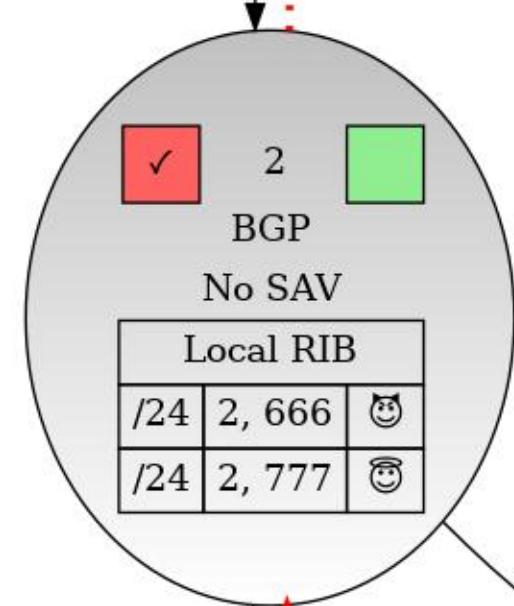
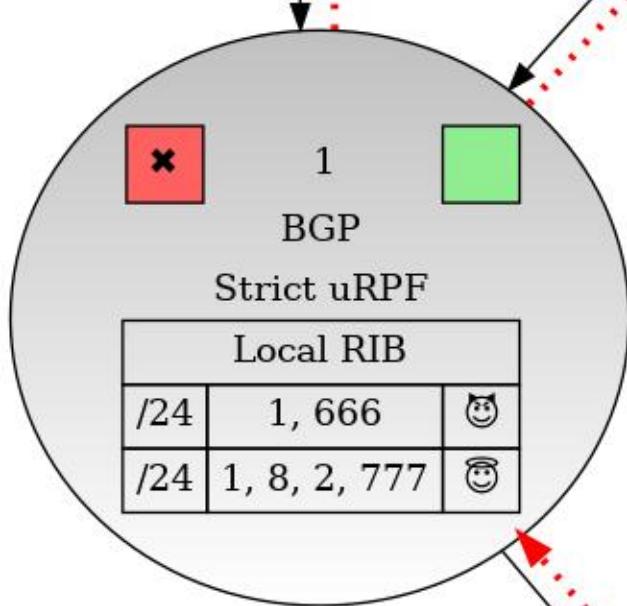
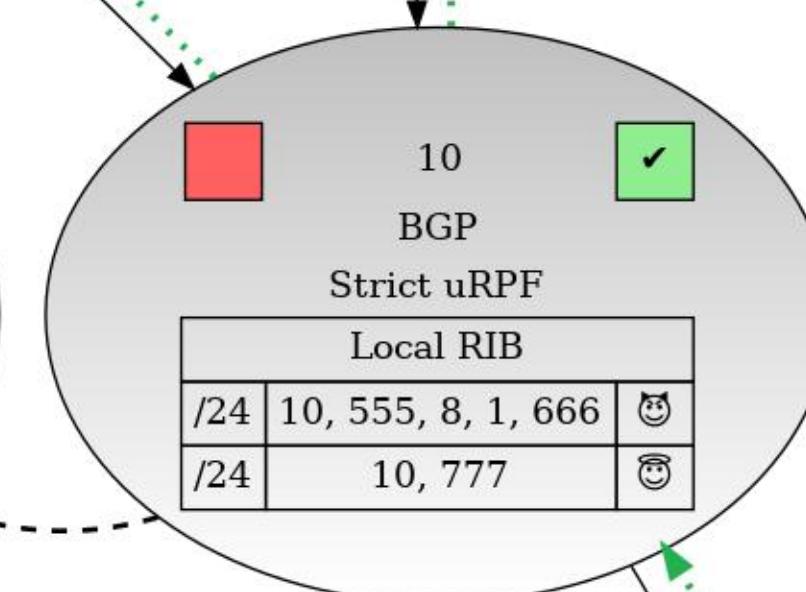
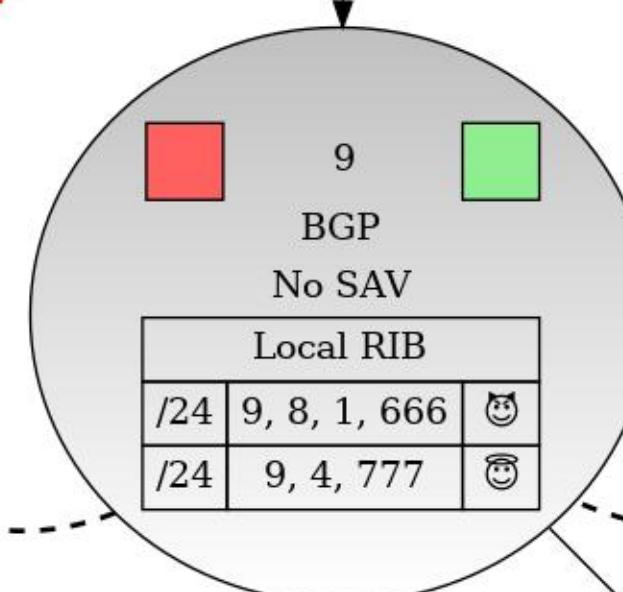
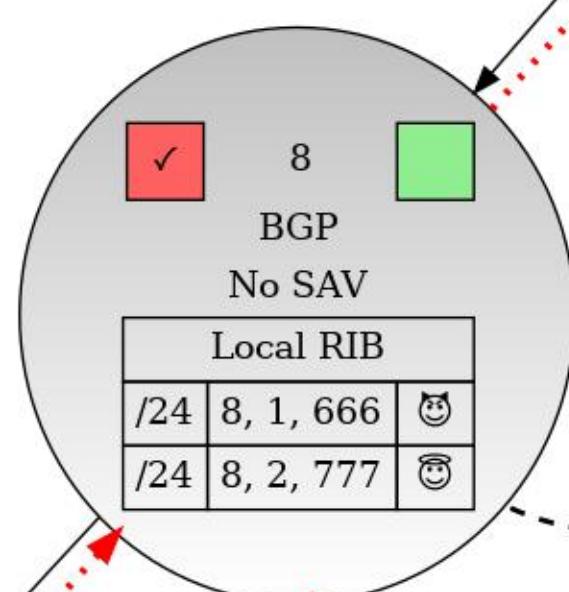
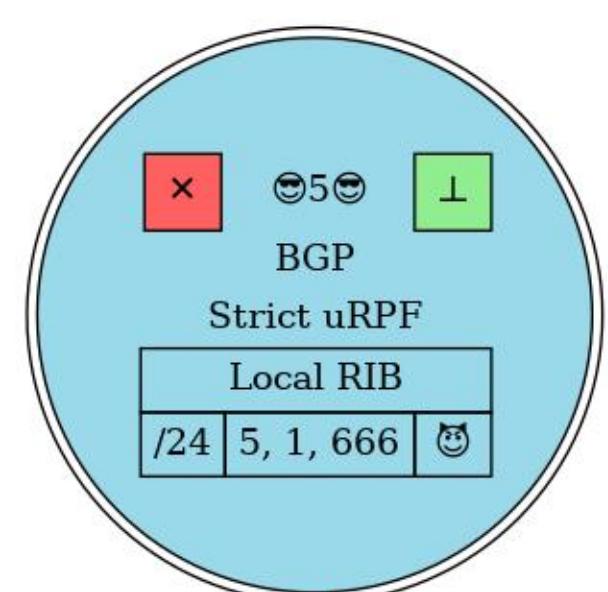
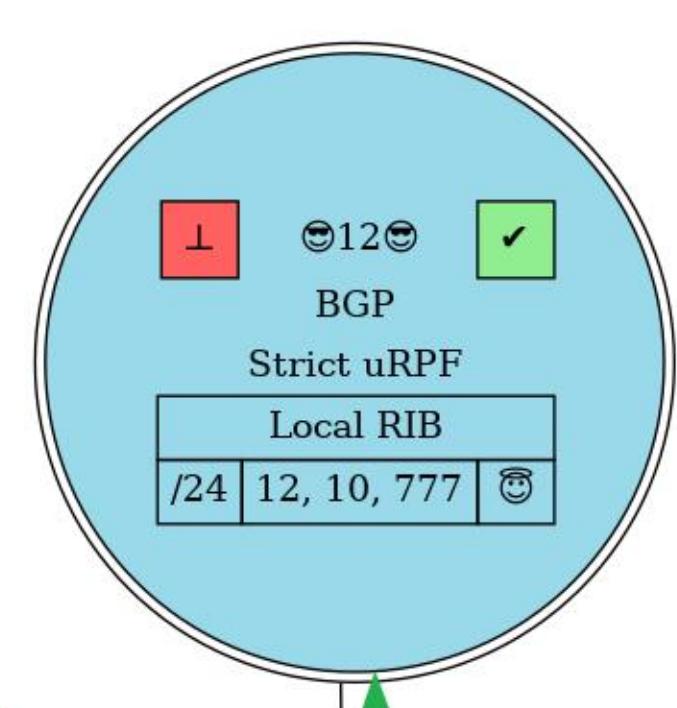
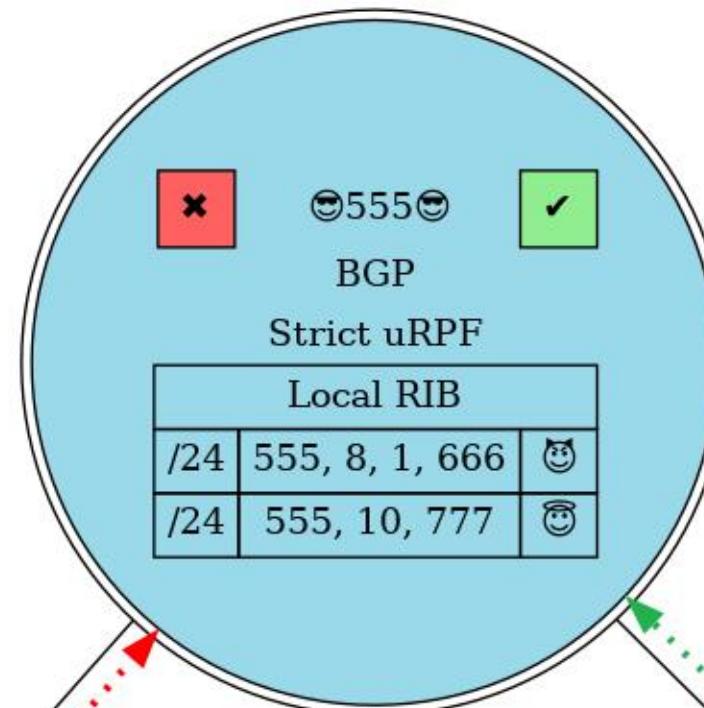
(config\_004)  
Single reflector running BAR SAV

### (Data Plane Outcomes)

(Attacker Outcomes)

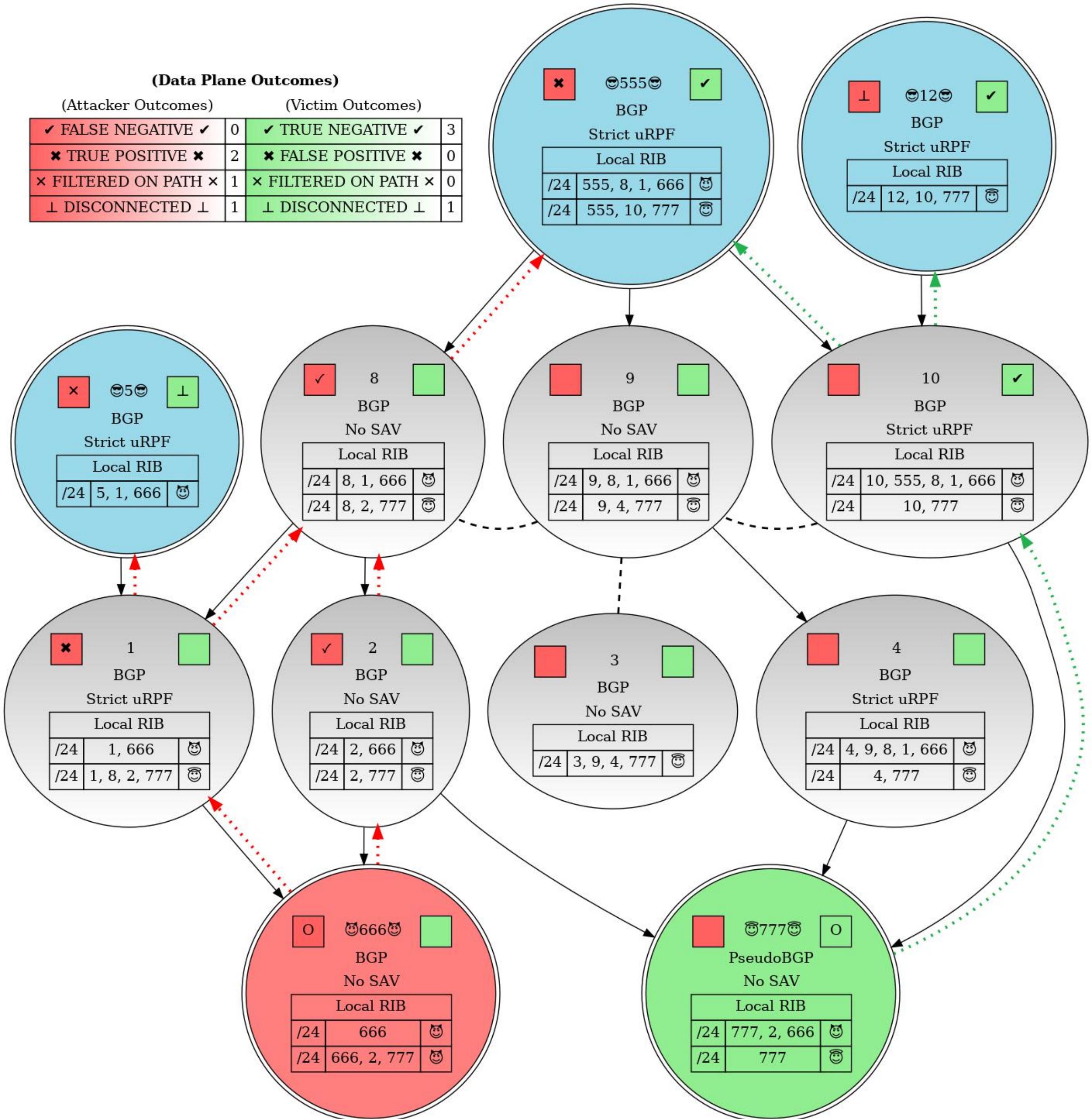
(Victim Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	3
✗ TRUE POSITIVE ✗	2	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	1	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	1	⊥ DISCONNECTED ⊥	1



(config\_005 Ground Truth)  
Multiple reflector and immediate providers deploying Strict uRPF

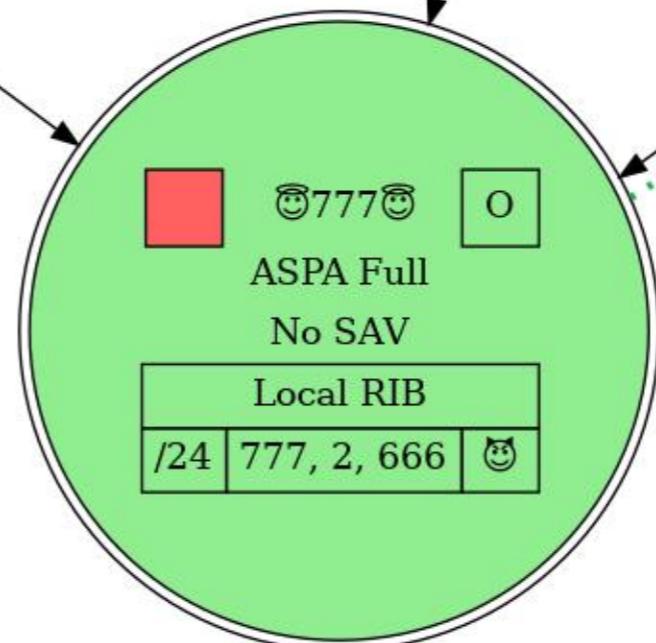
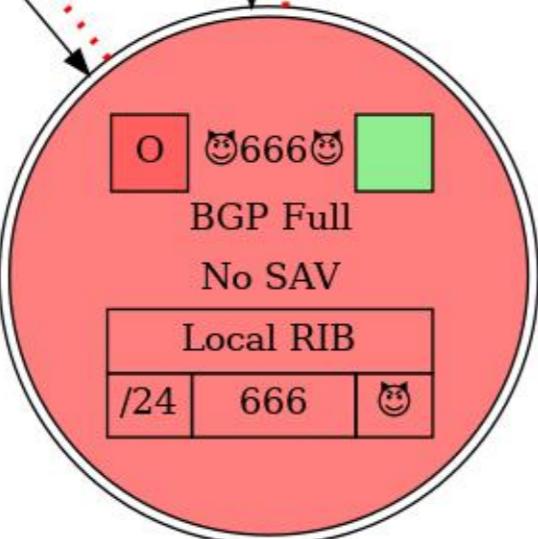
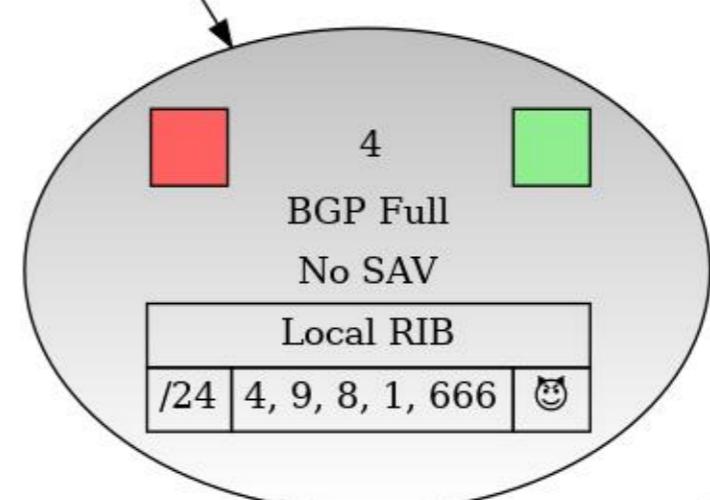
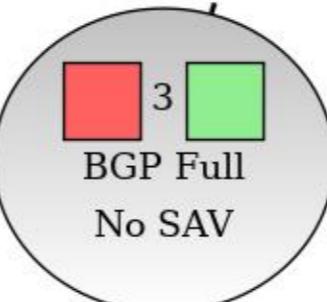
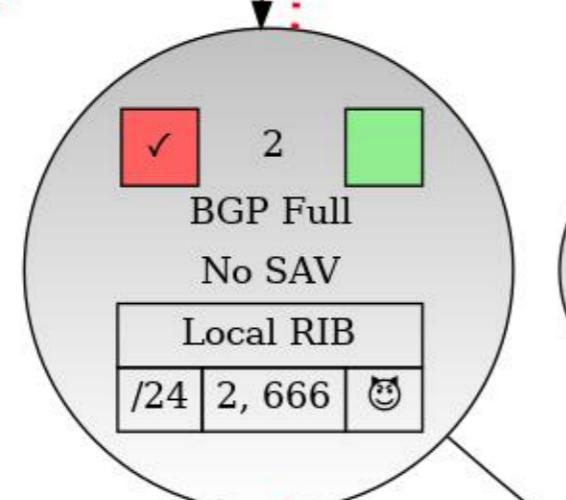
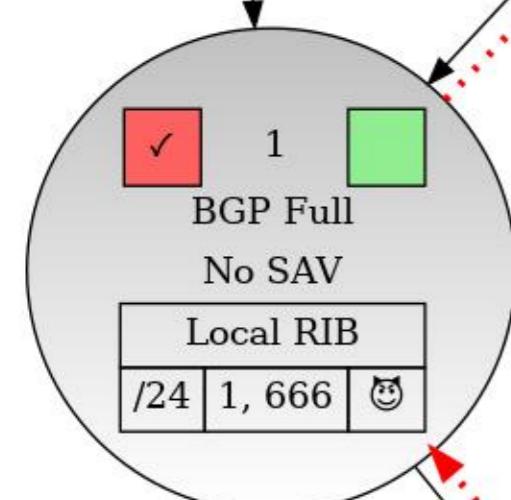
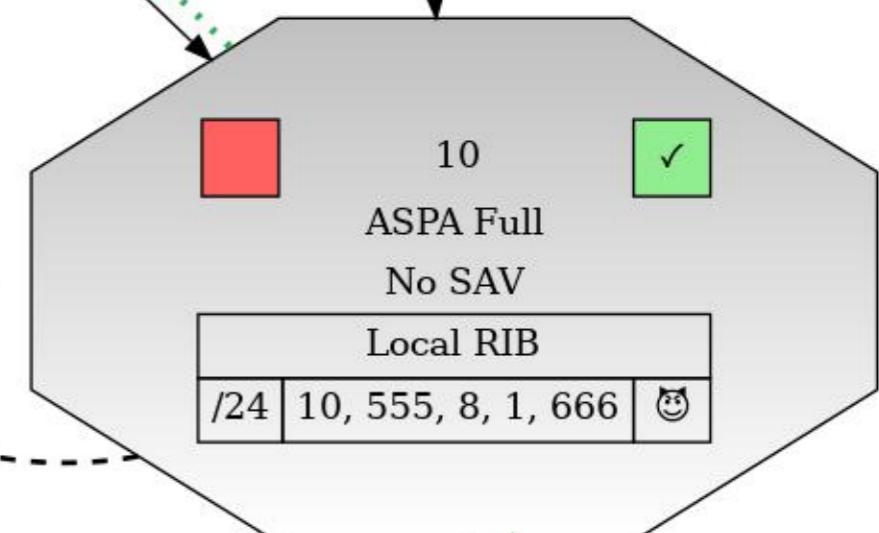
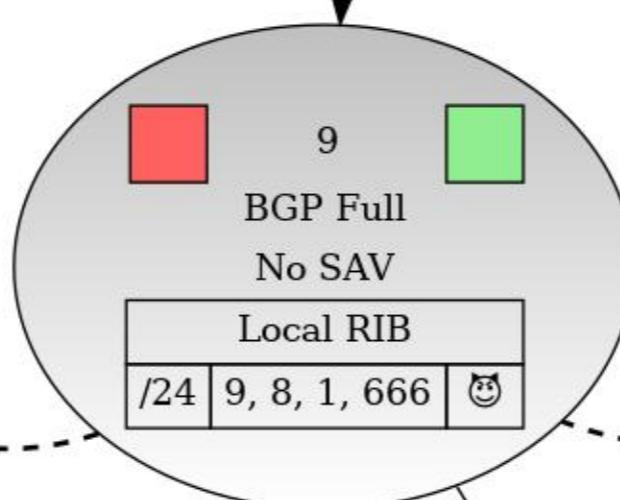
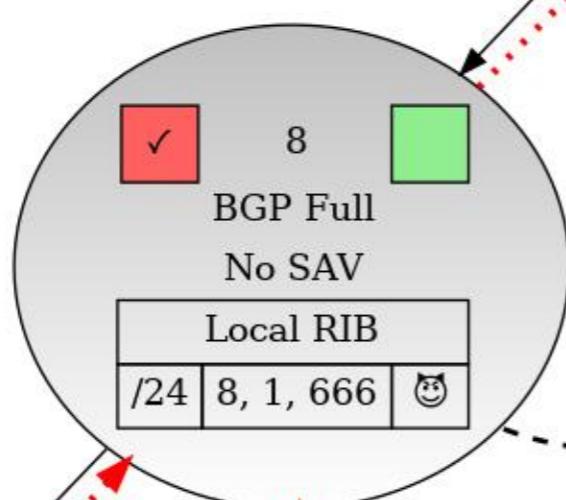
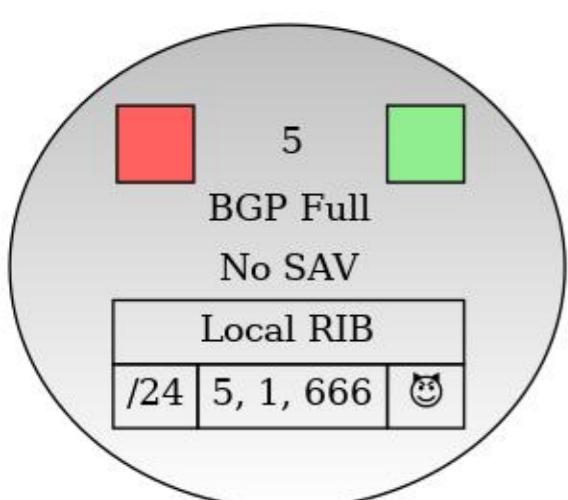
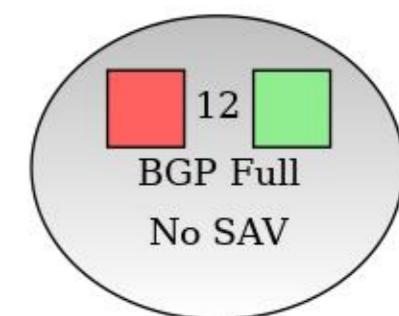
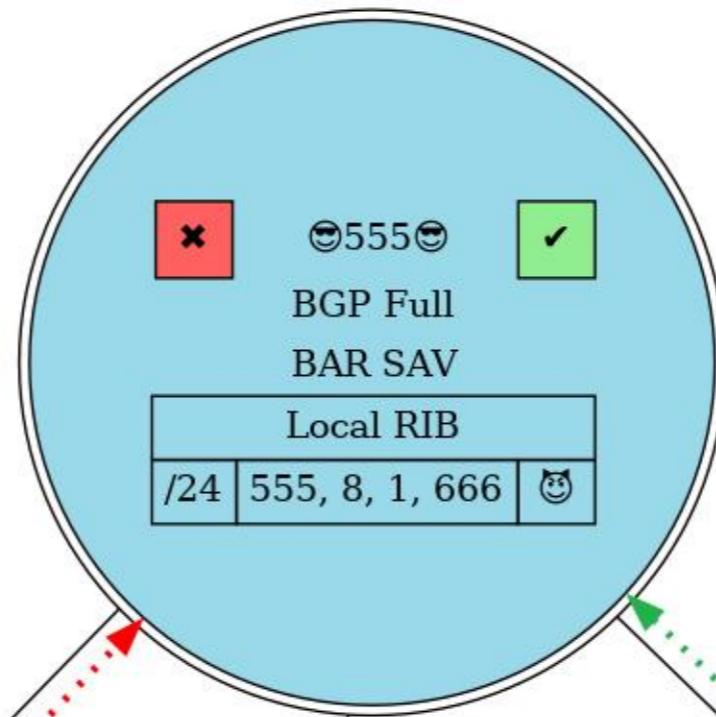
(Data Plane Outcomes)			
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	3
✗ TRUE POSITIVE ✗	2	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	1	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	1	⊥ DISCONNECTED ⊥	1



(config\_005)  
Multiple reflector and immediate providers deploying Strict uRPF

### (Data Plane Outcomes)

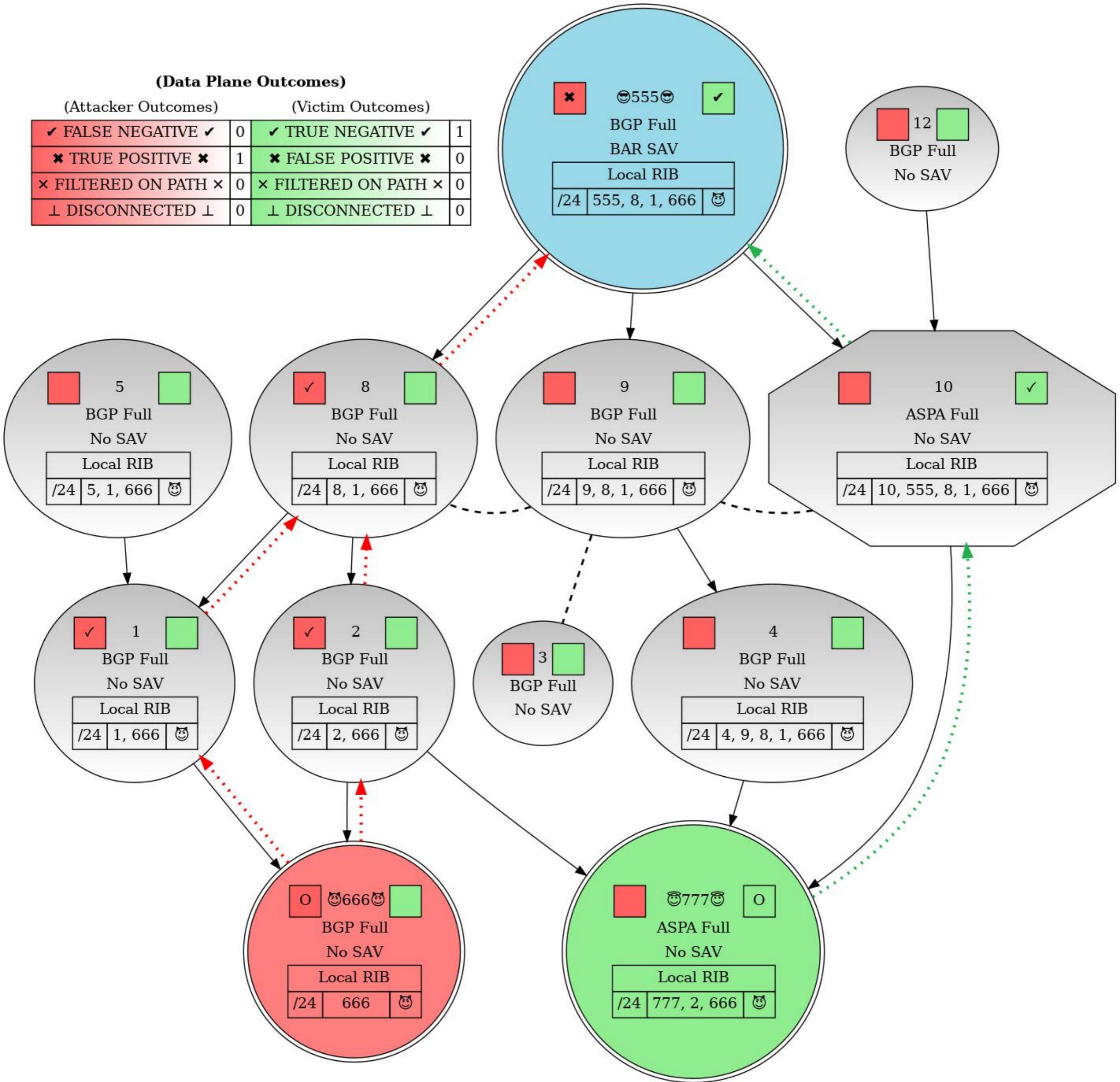
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_007 Ground Truth)  
Single reflector running BAR SAV, victim does not announce prefix

### (Data Plane Outcomes)

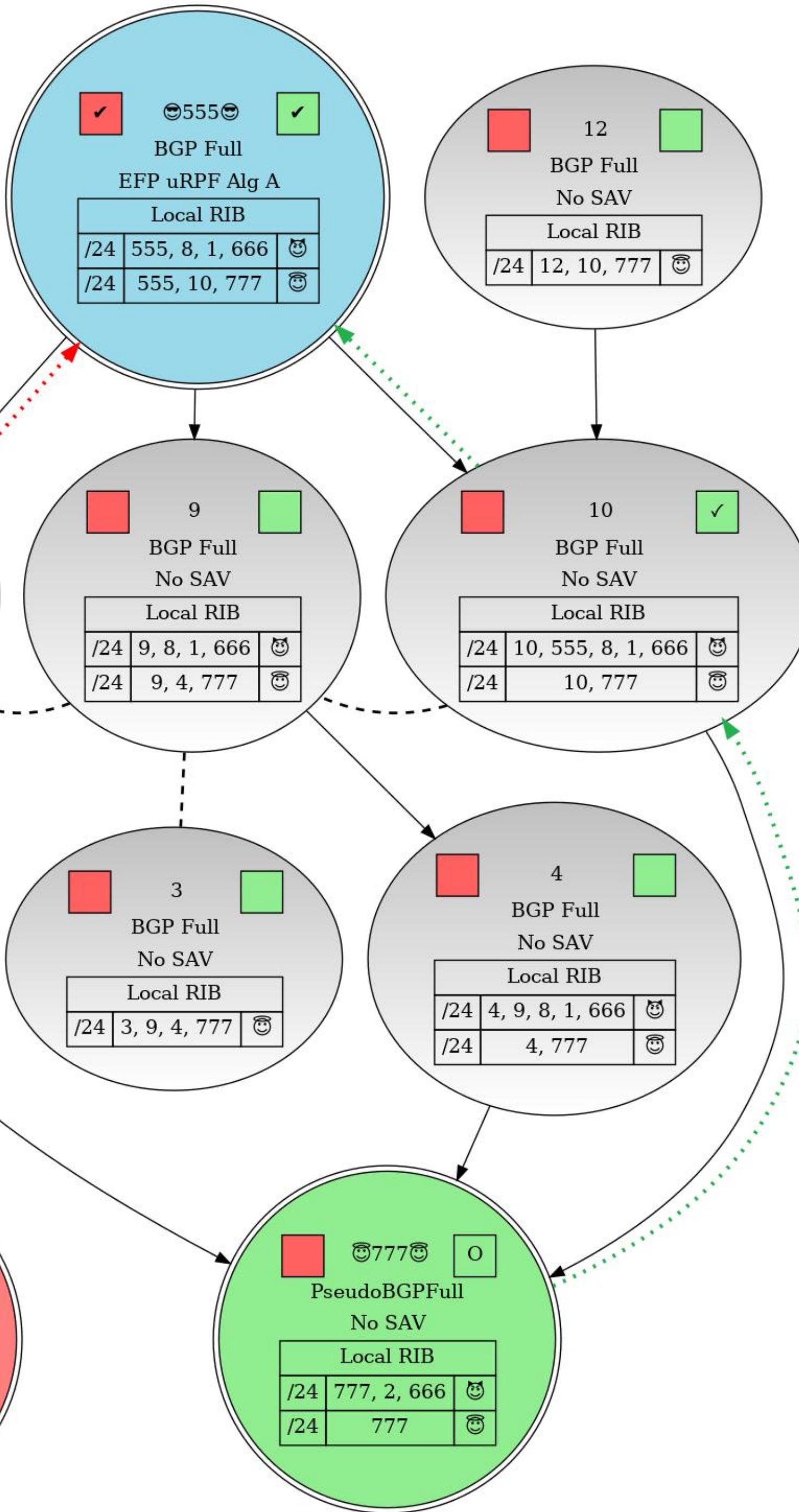
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_007)  
Single reflector running BAR SAV, victim does not announce prefix

**(Data Plane Outcomes)**

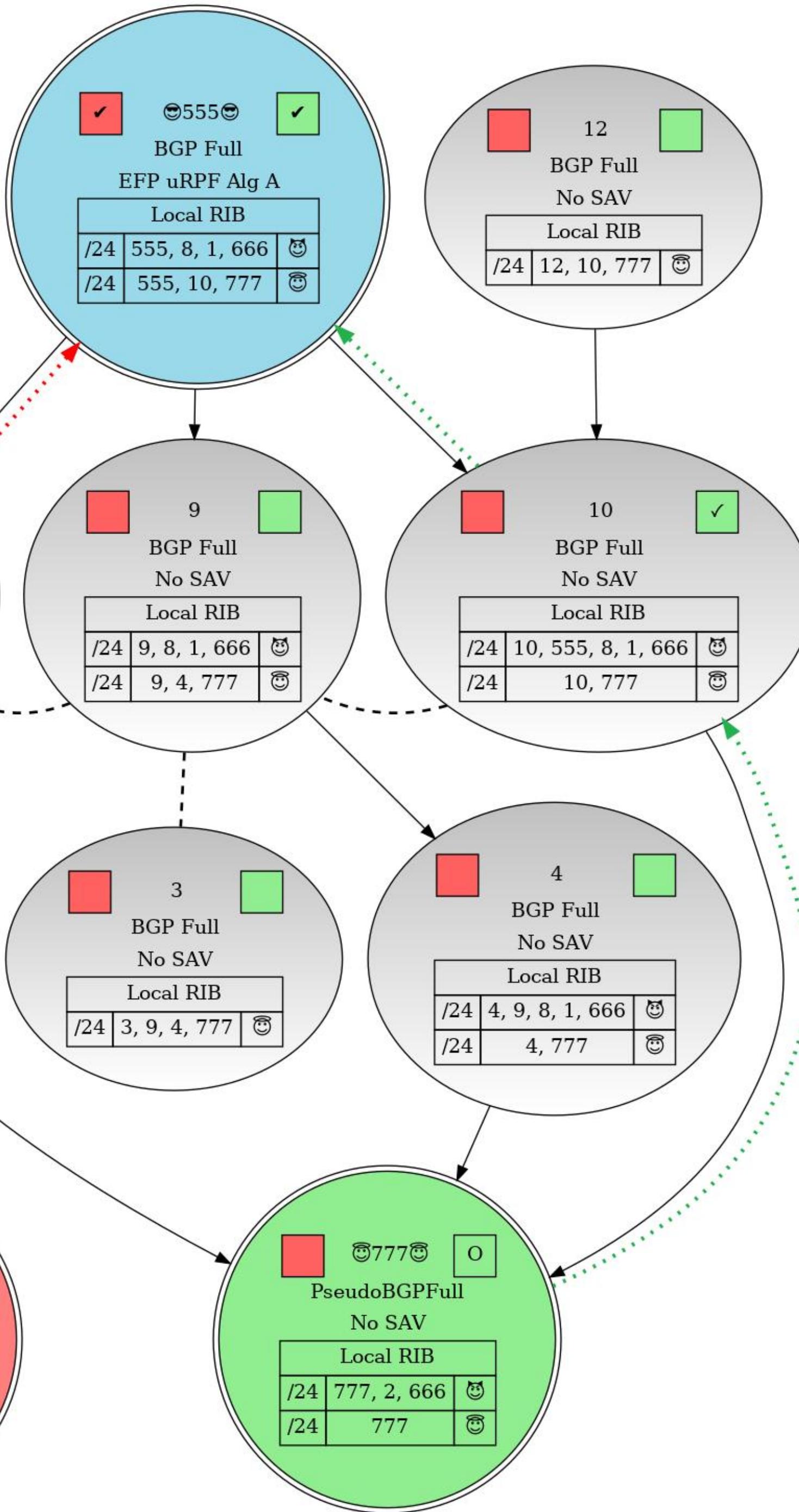
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_008 Ground Truth)  
Single reflector running Enhanced Feasible Path uRPF Algorithm A

**(Data Plane Outcomes)**

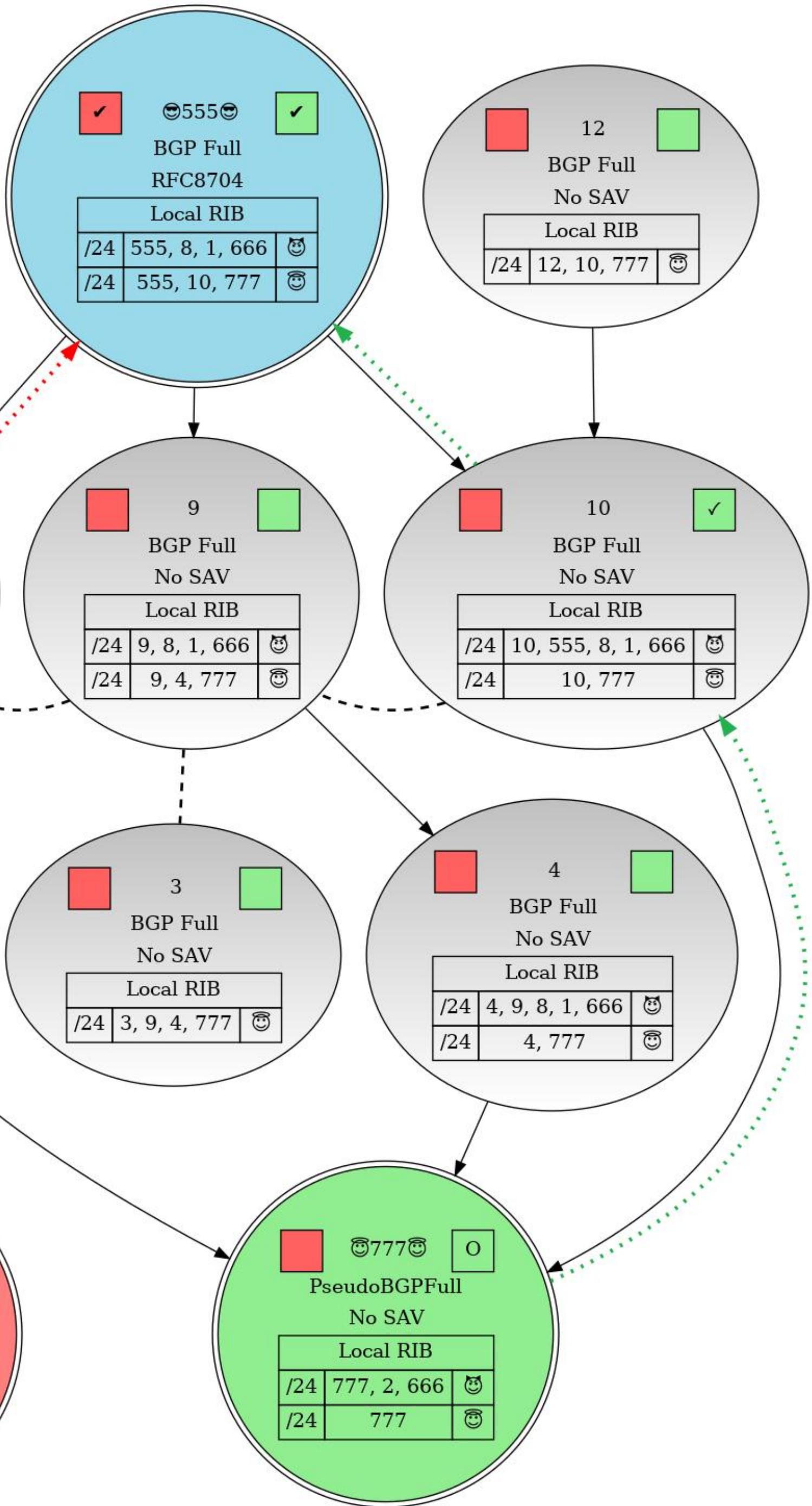
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_008)  
Single reflector running Enhanced Feasible Path uRPF Algorithm A

**(Data Plane Outcomes)**

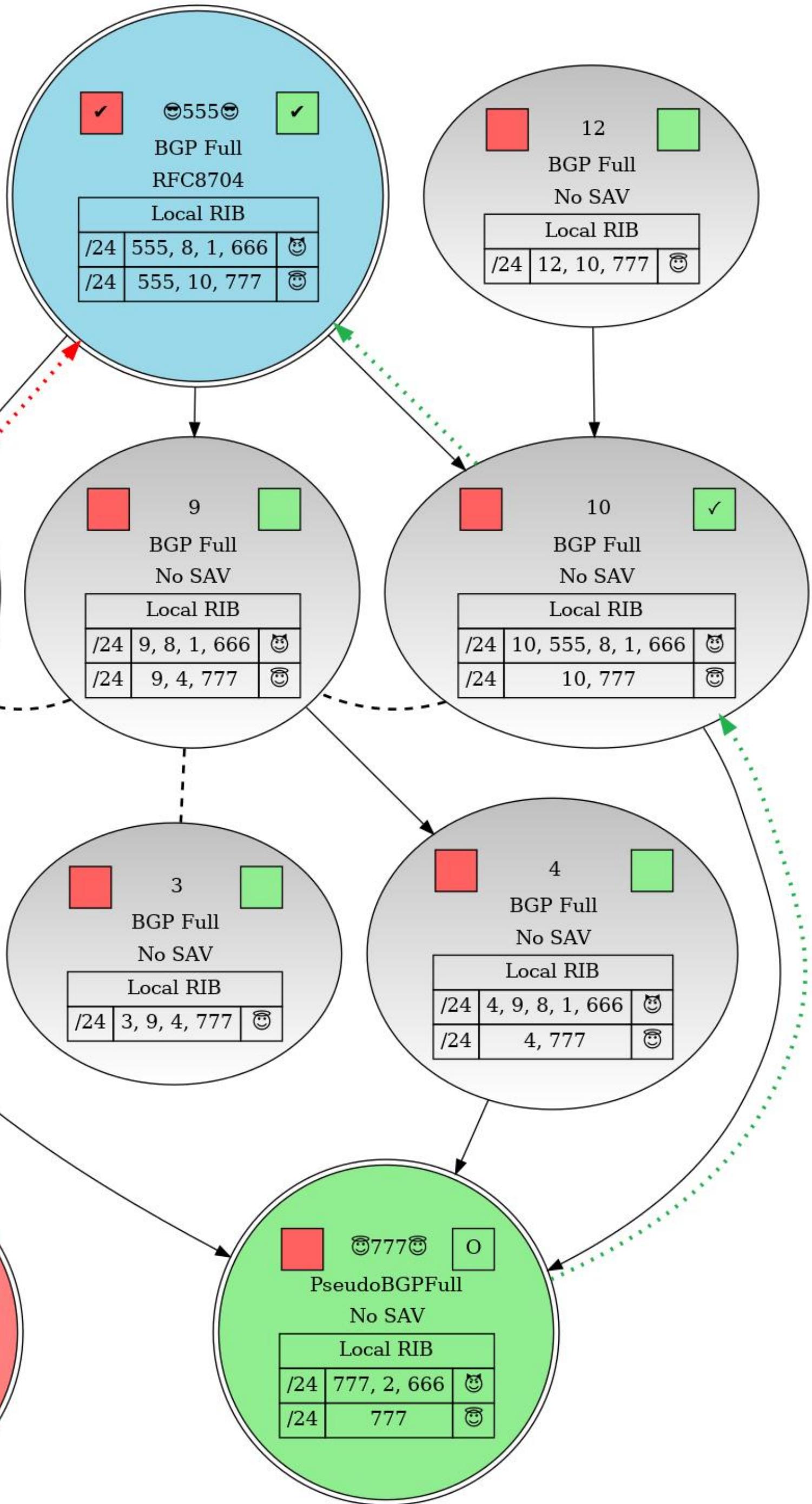
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_009 Ground Truth)  
Single reflector running RFC8704 Security Recommendations

**(Data Plane Outcomes)**

(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



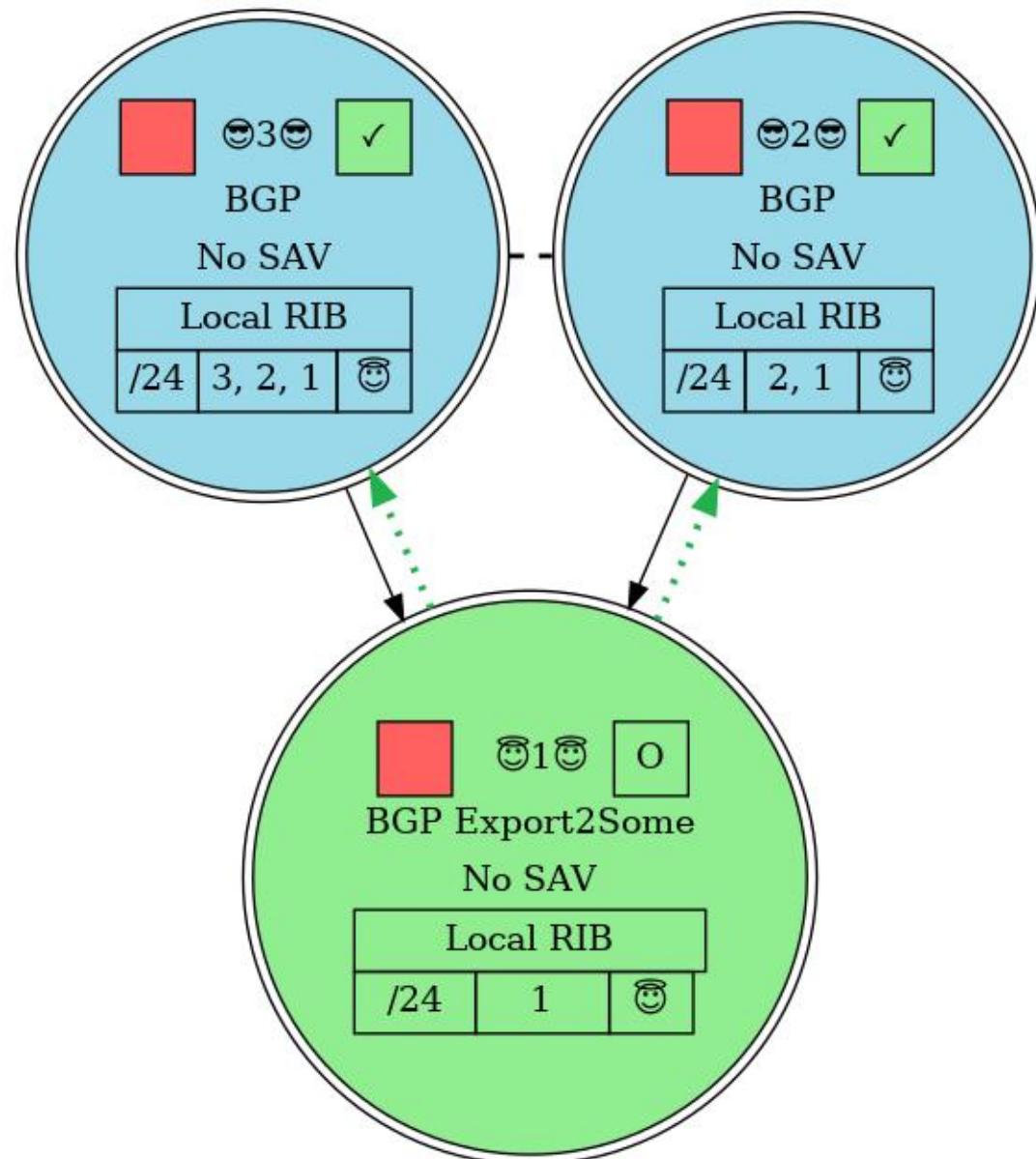
(config\_009)  
Single reflector running RFC8704 Security Recommendations

## (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

(Victim Outcomes)

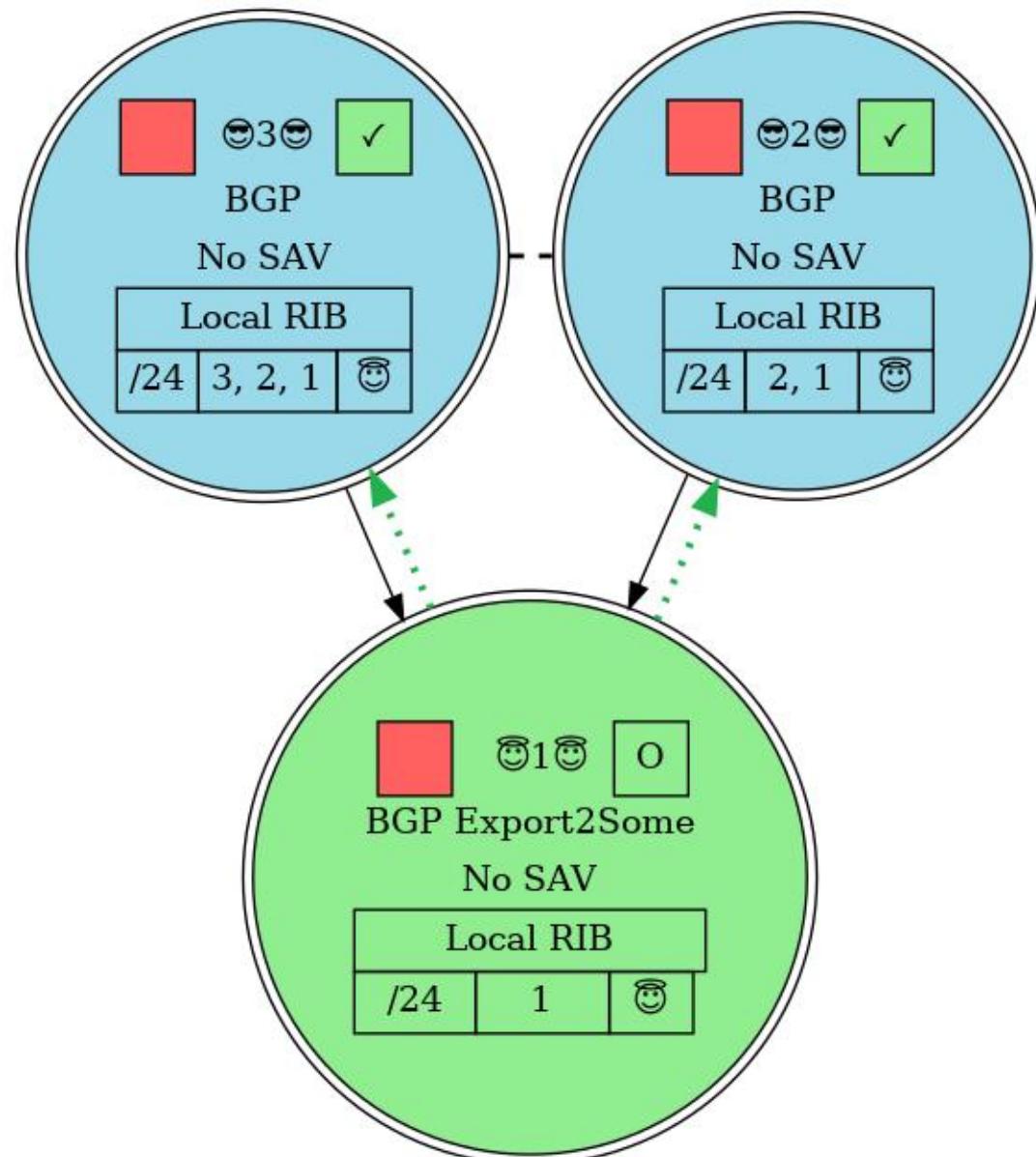


## (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

(Victim Outcomes)



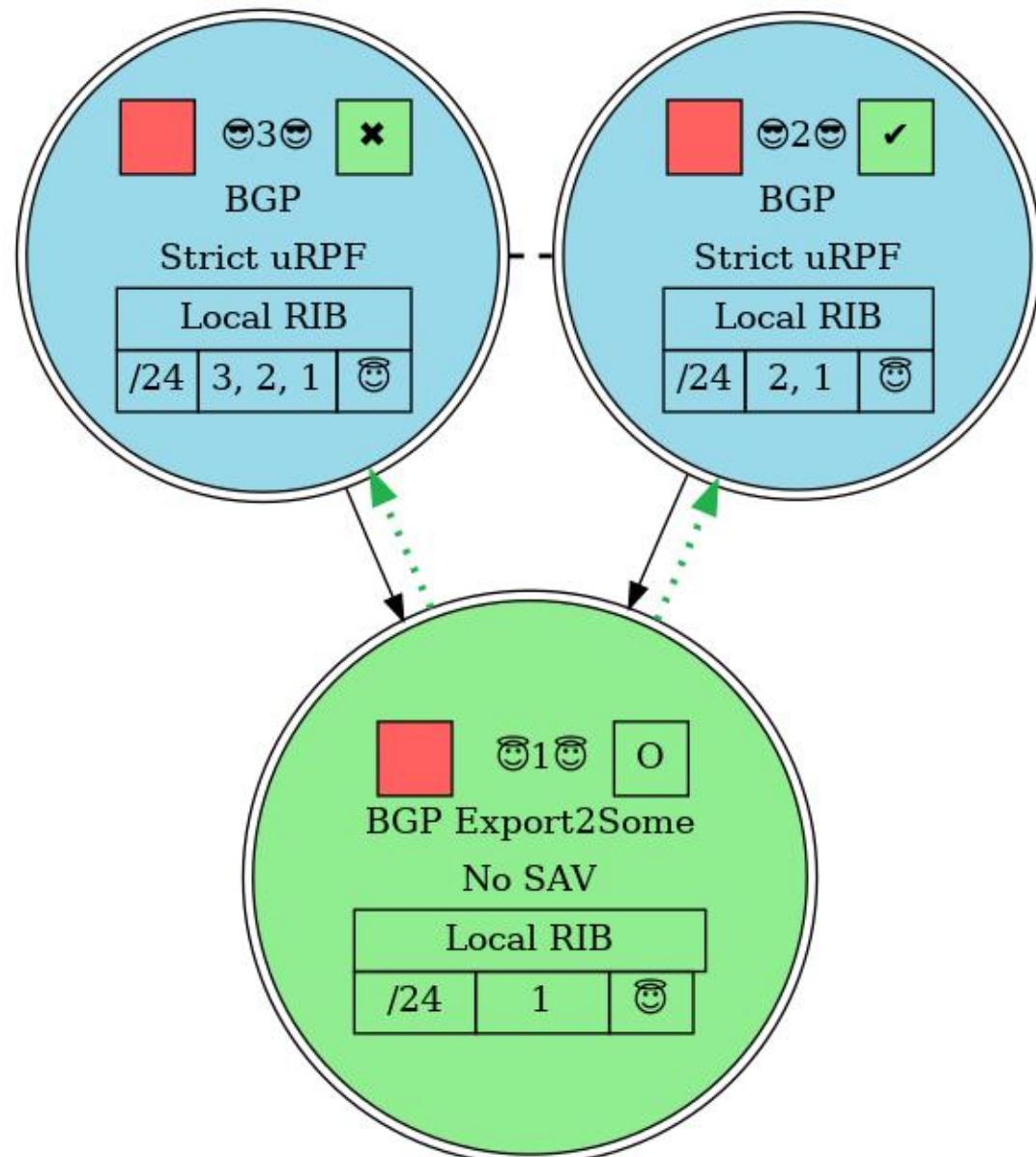
(config\_010)

## (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



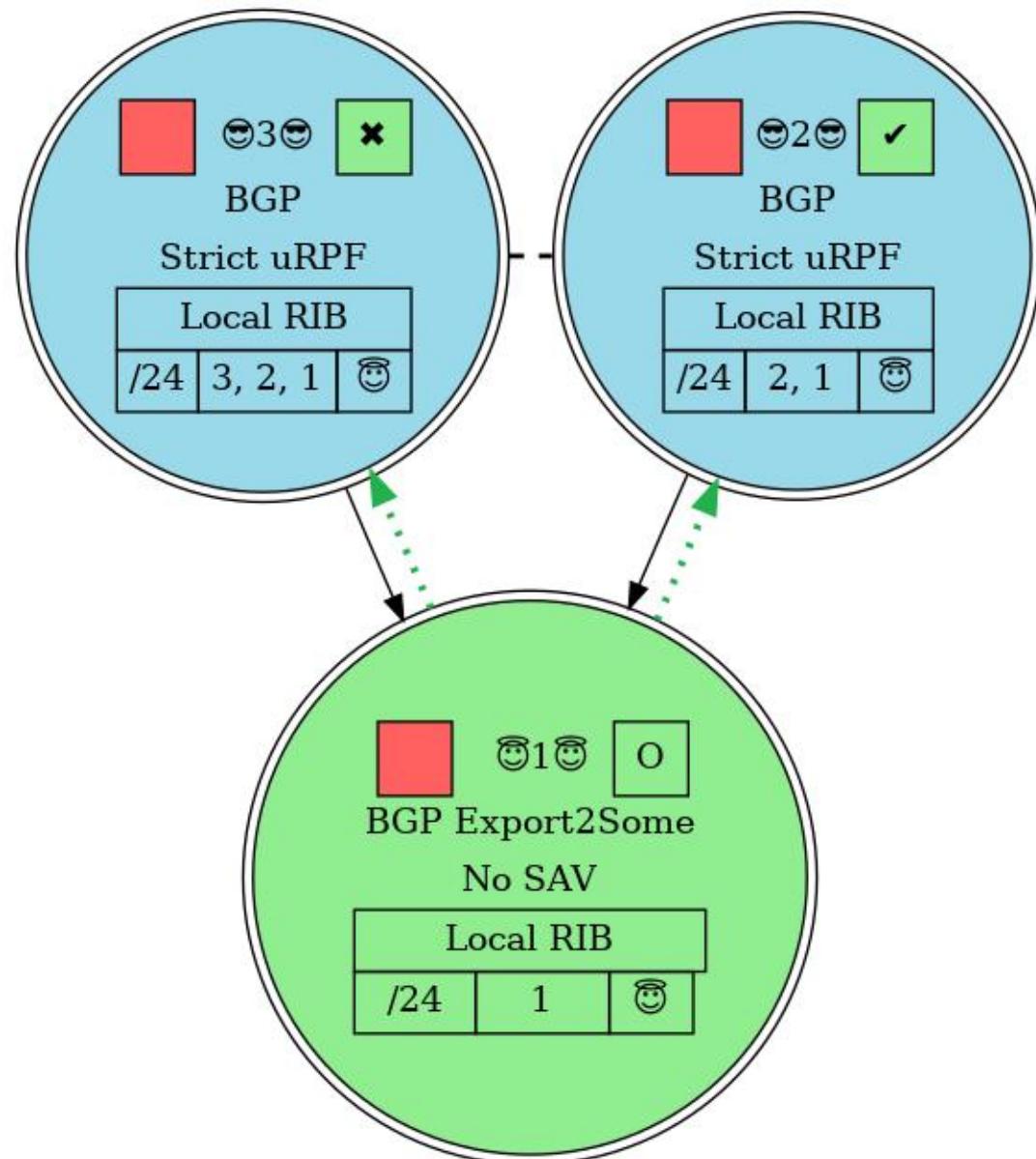
(config\_011 Ground Truth)

## (Data Plane Outcomes)

(Attacker Outcomes)

	(Victim Outcomes)
✓ FALSE NEGATIVE ✓	0 ✓ TRUE NEGATIVE ✓ 1
✗ TRUE POSITIVE ✗	0 ✗ FALSE POSITIVE ✗ 1
✗ FILTERED ON PATH ✗	0 ✗ FILTERED ON PATH ✗ 0
⊥ DISCONNECTED ⊥	0 ⊥ DISCONNECTED ⊥ 0

(Victim Outcomes)



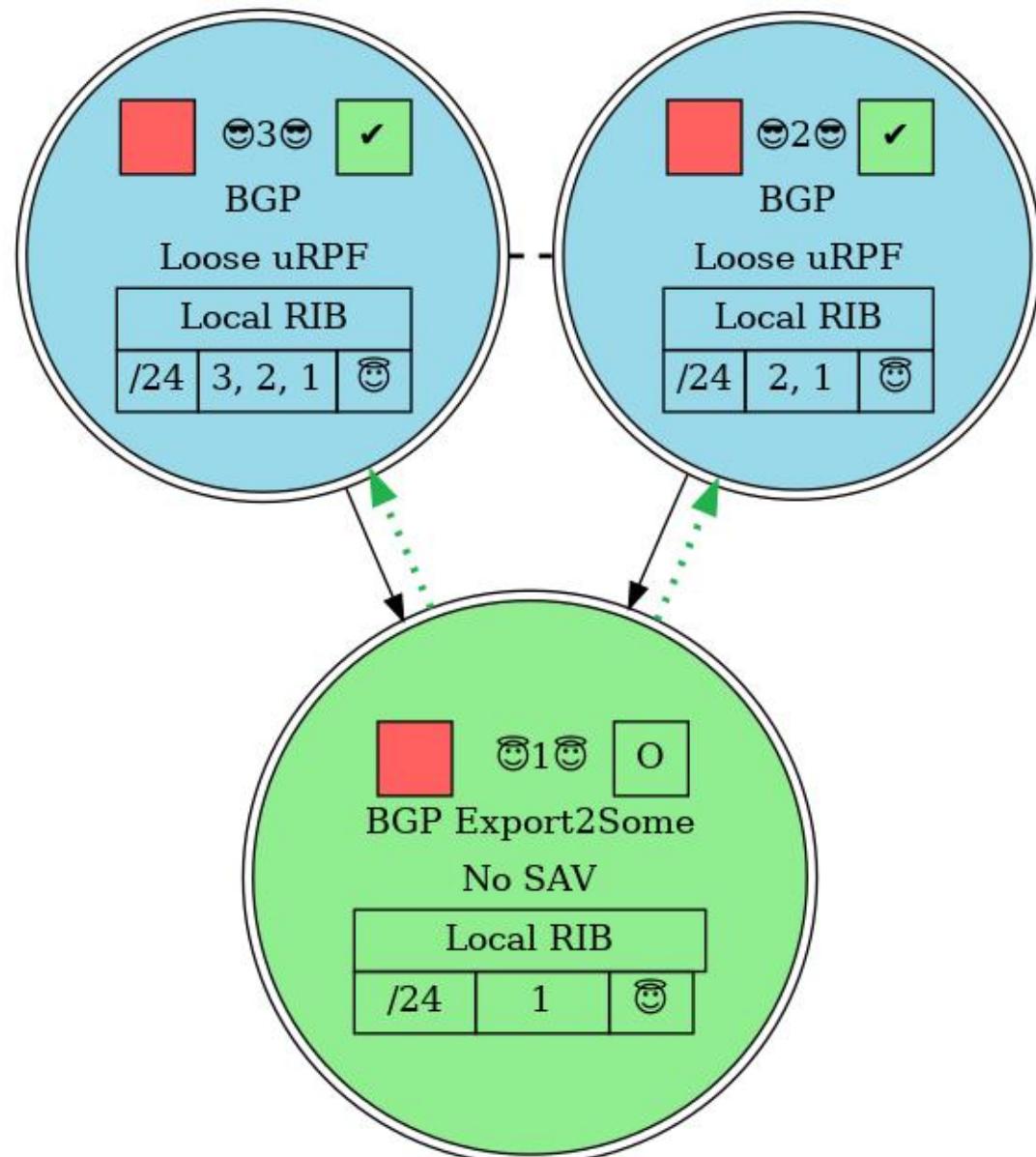
(config\_011)

## (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

(Victim Outcomes)



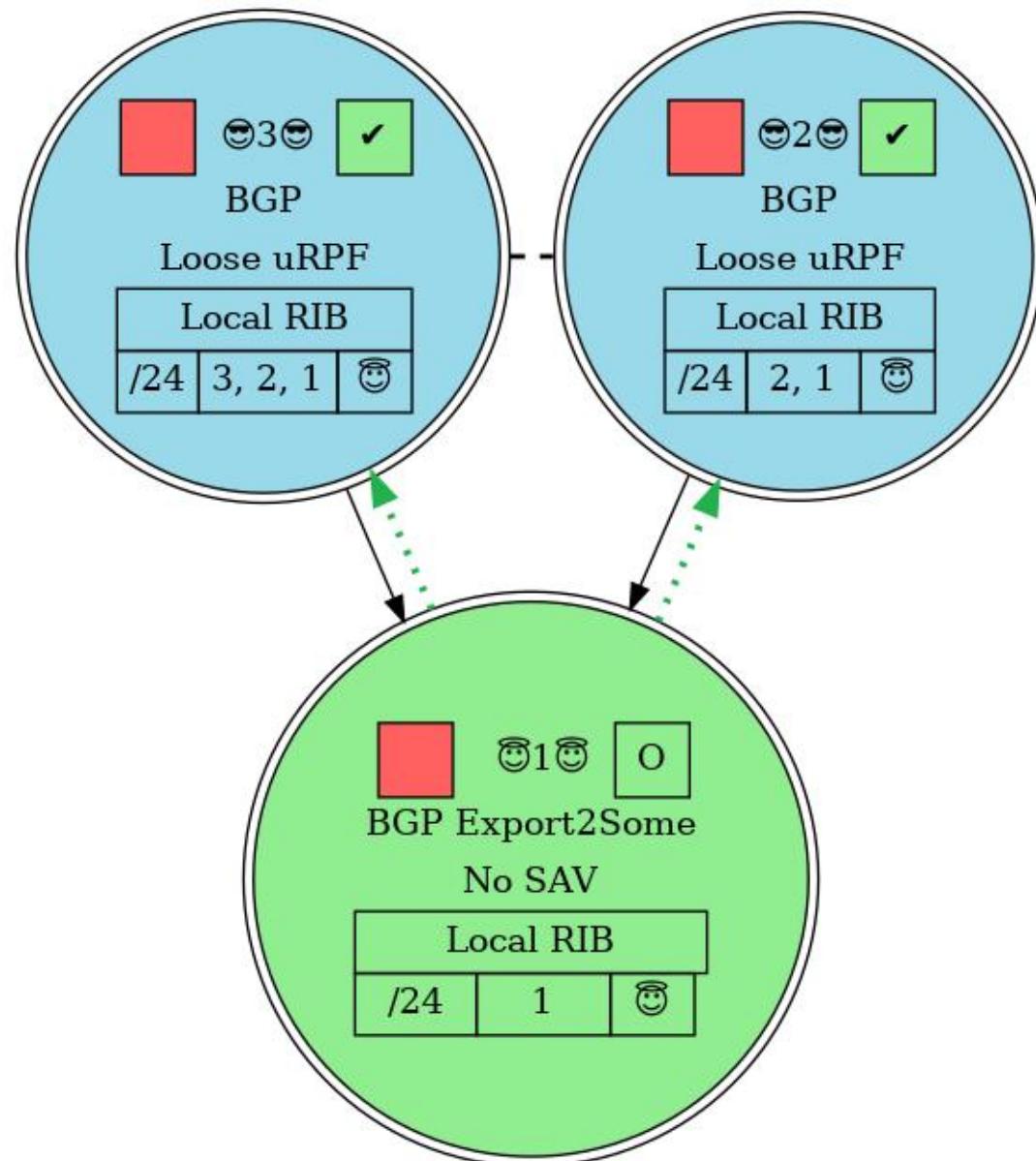
(config\_012 Ground Truth)

## (Data Plane Outcomes)

(Attacker Outcomes)

		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

(config\_012)

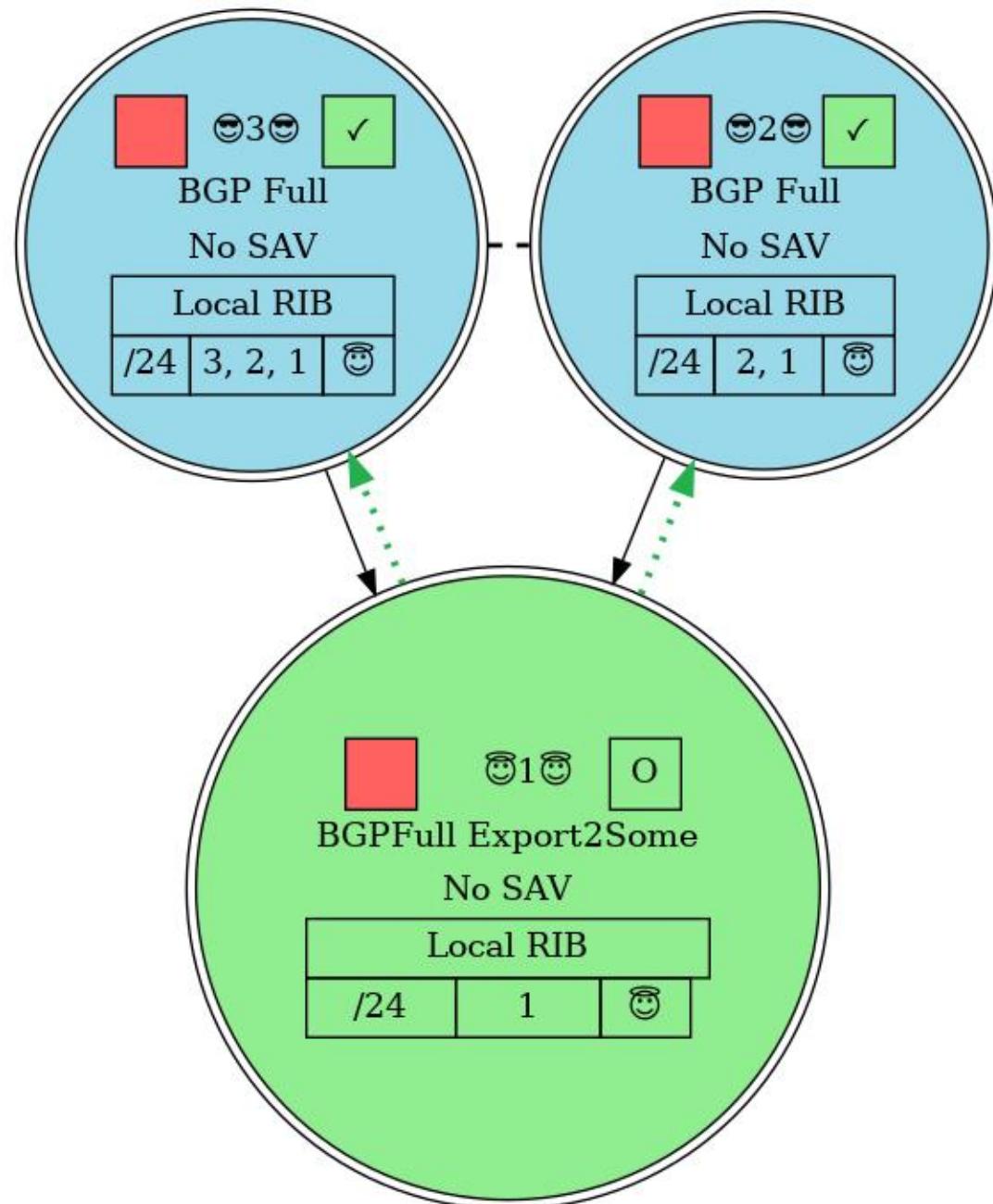


## (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

(Victim Outcomes)

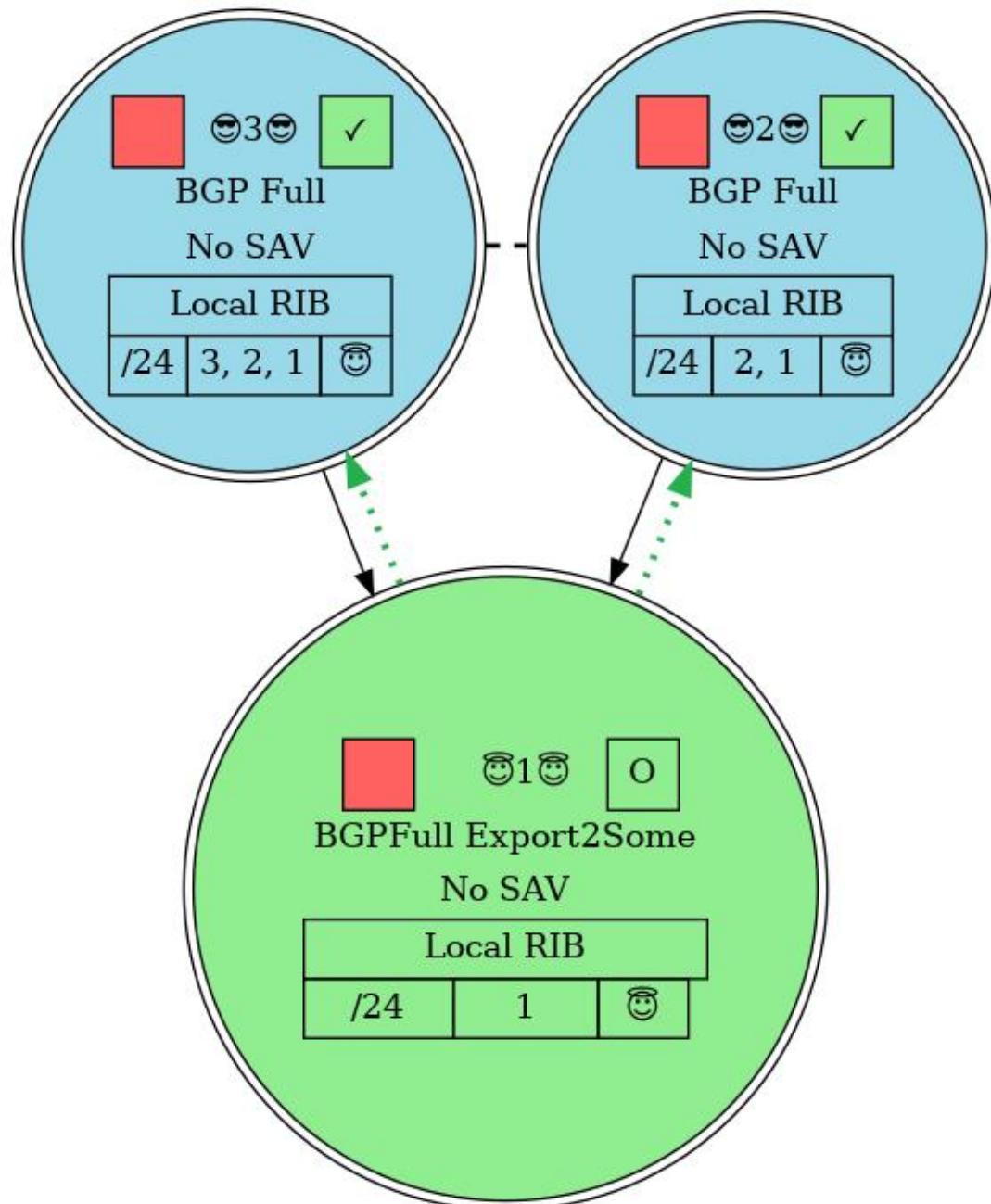


(config\_013 Ground Truth)

## (Data Plane Outcomes)

(Attacker Outcomes)

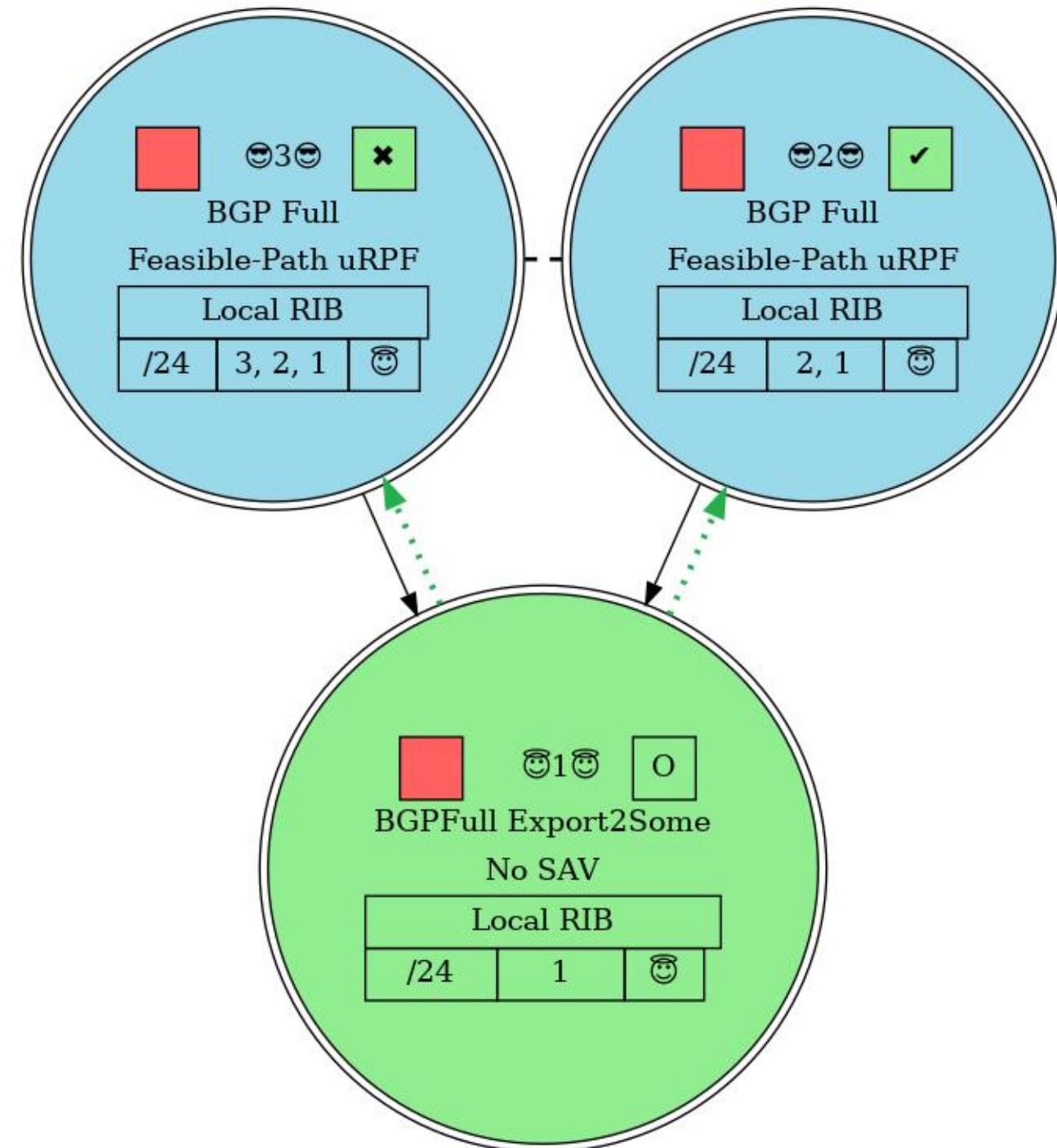
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_013)

### (Data Plane Outcomes)

(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

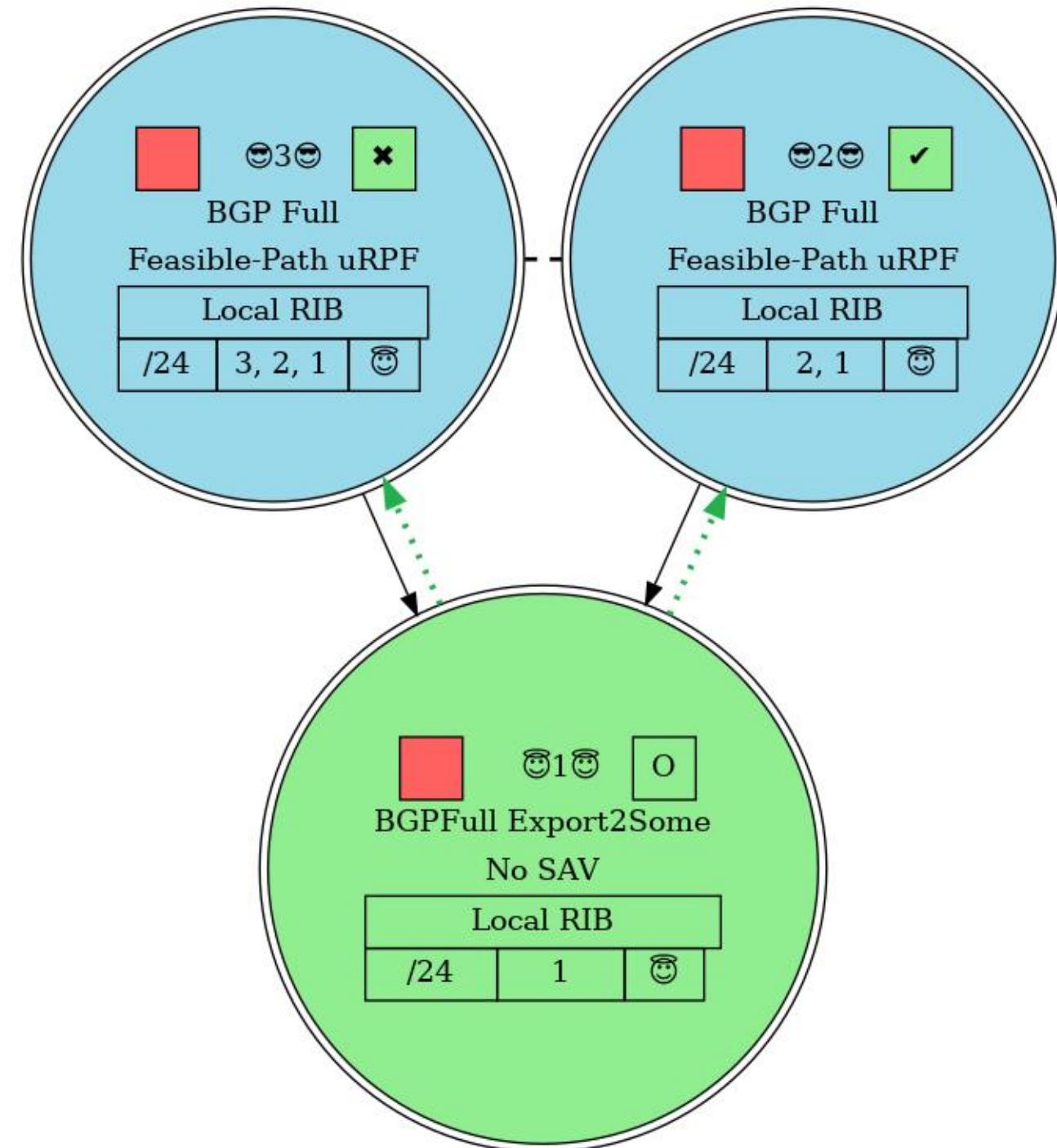


(config\_014 Ground Truth)

### (Data Plane Outcomes)

(Attacker Outcomes)

		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



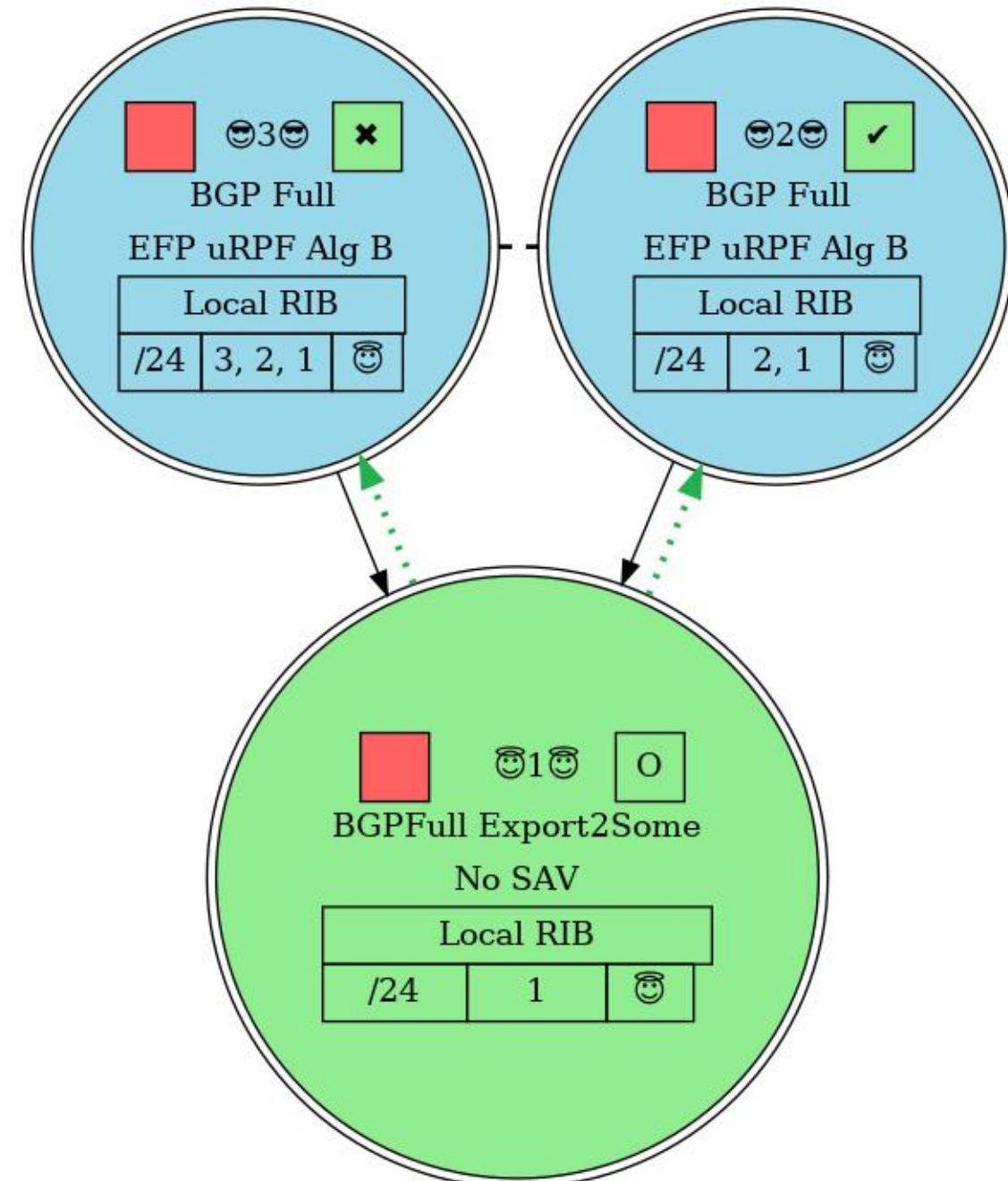
(config\_014)

## (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



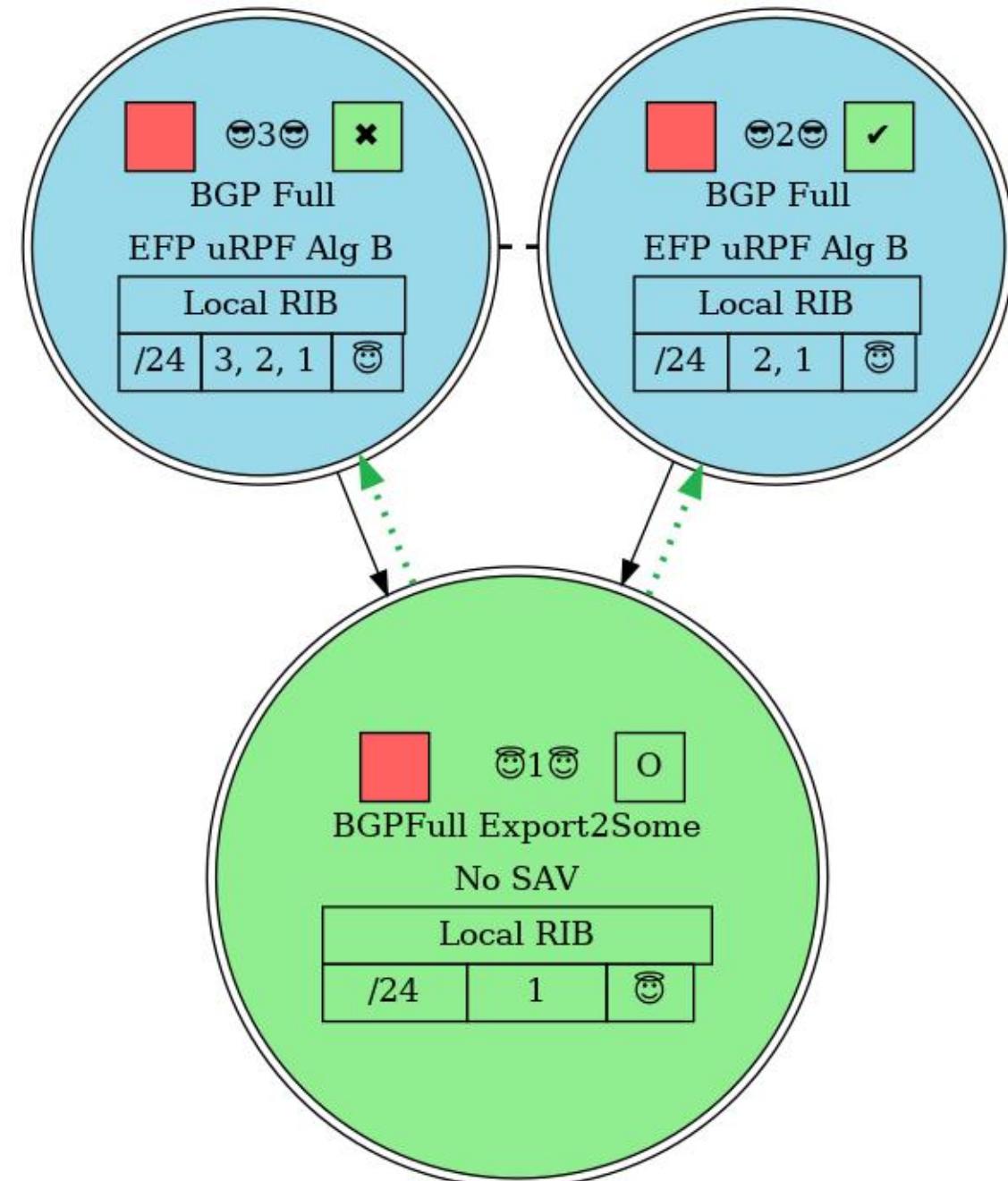
(config\_015 Ground Truth)

## (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

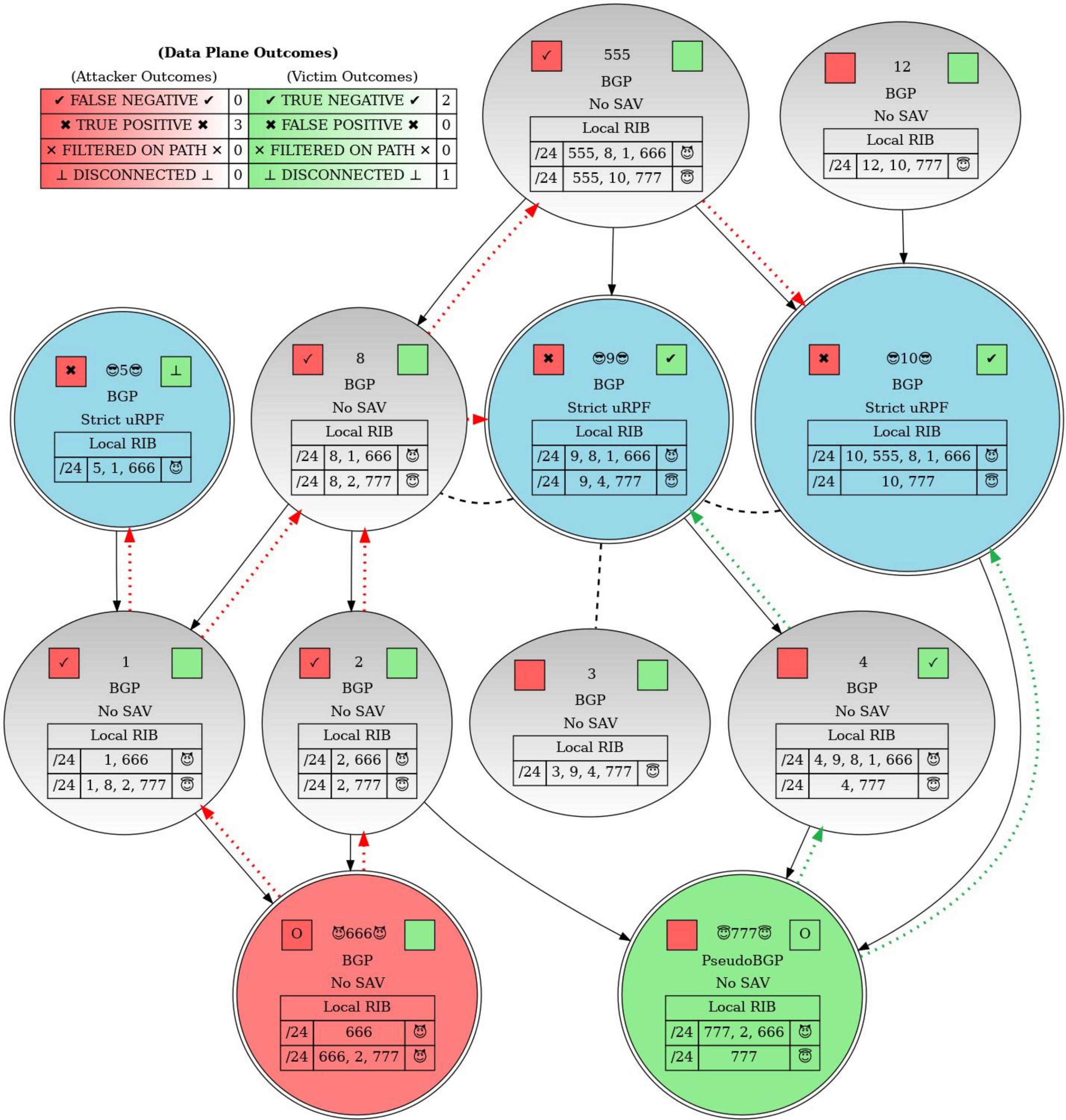
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



(config\_015)

### (Data Plane Outcomes)

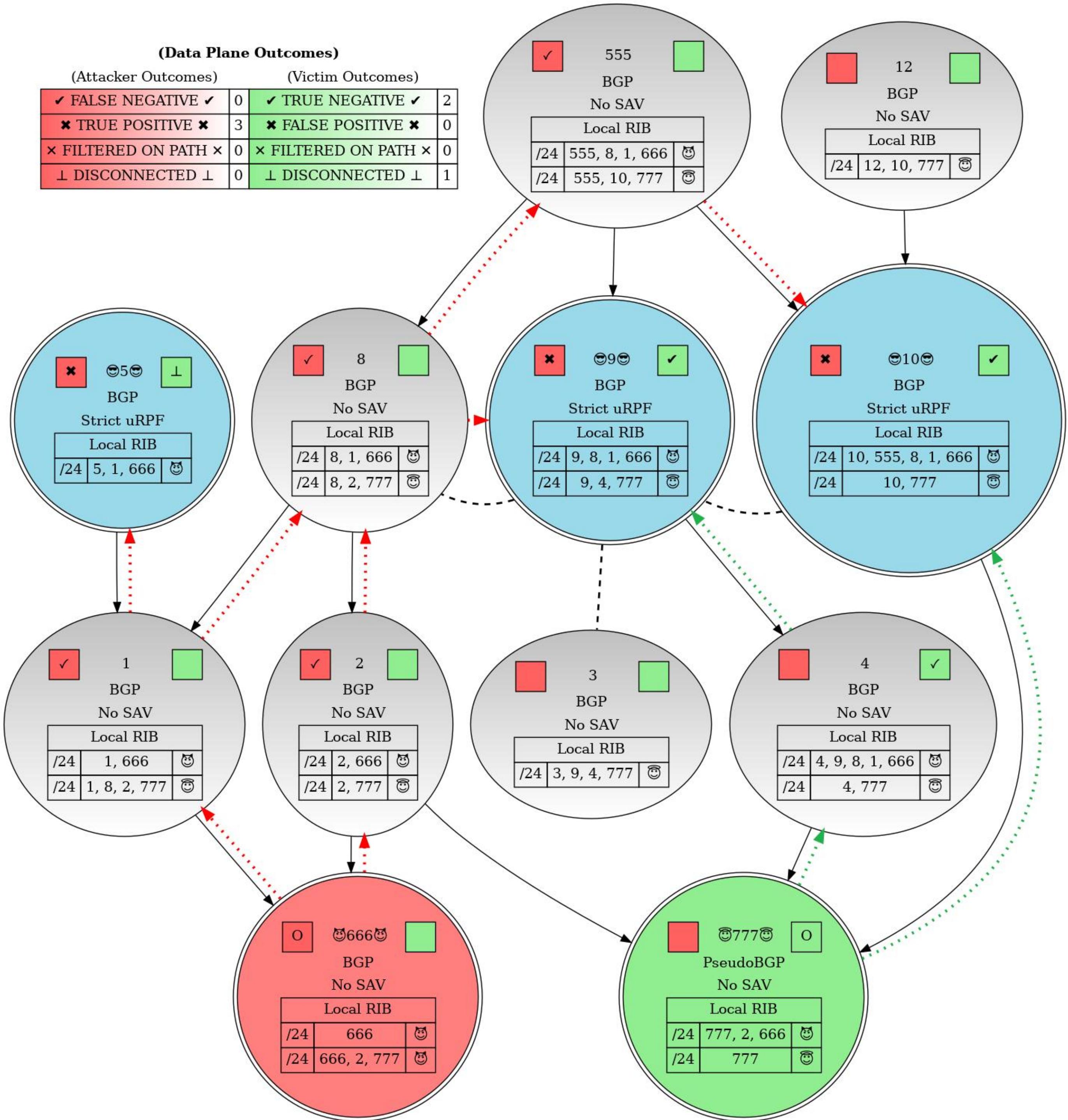
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	3	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	1



(config\_030 Ground Truth)  
Single reflector running Strict uRPF

### (Data Plane Outcomes)

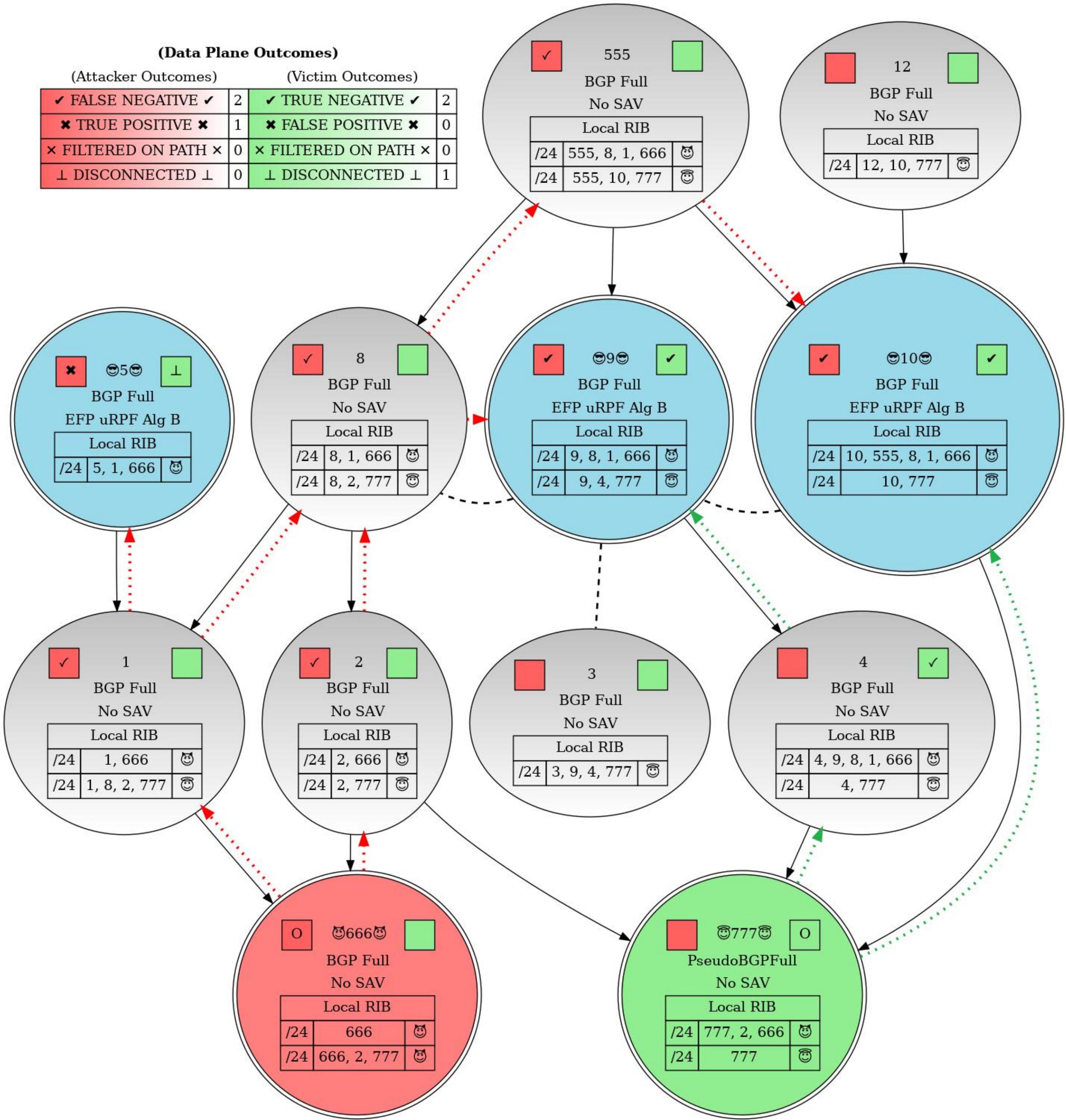
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	3	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	1



(config\_030)  
Single reflector running Strict uRPF

### (Data Plane Outcomes)

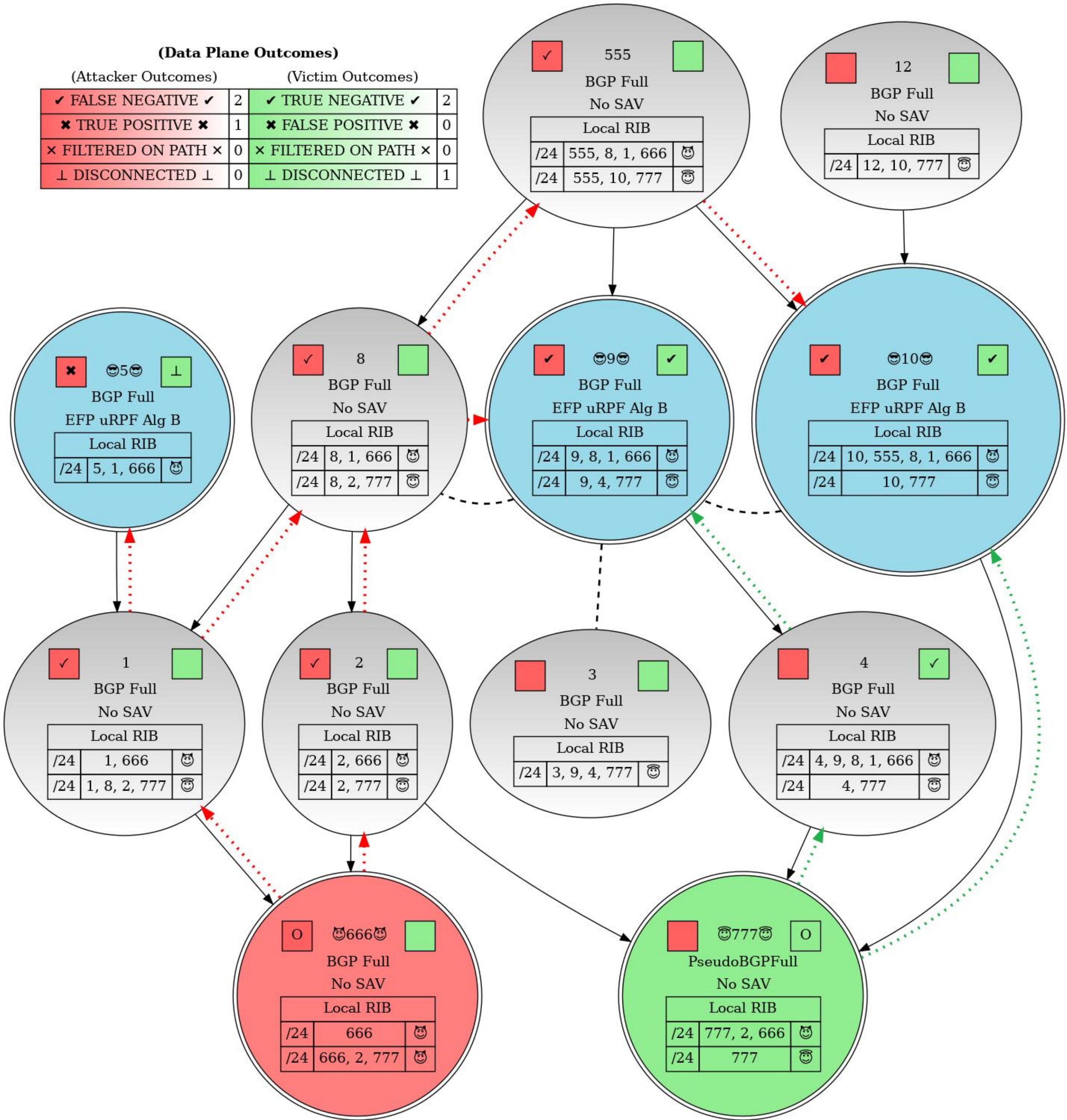
(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	2	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	1



(config\_031 Ground Truth)  
Multiple Reflectors w Applied Interfaces

### (Data Plane Outcomes)

(Attacker Outcomes)		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	2	✓ TRUE NEGATIVE ✓	2
✗ TRUE POSITIVE ✗	1	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	1



(config\_031)  
Multiple Reflectors w Applied Interfaces

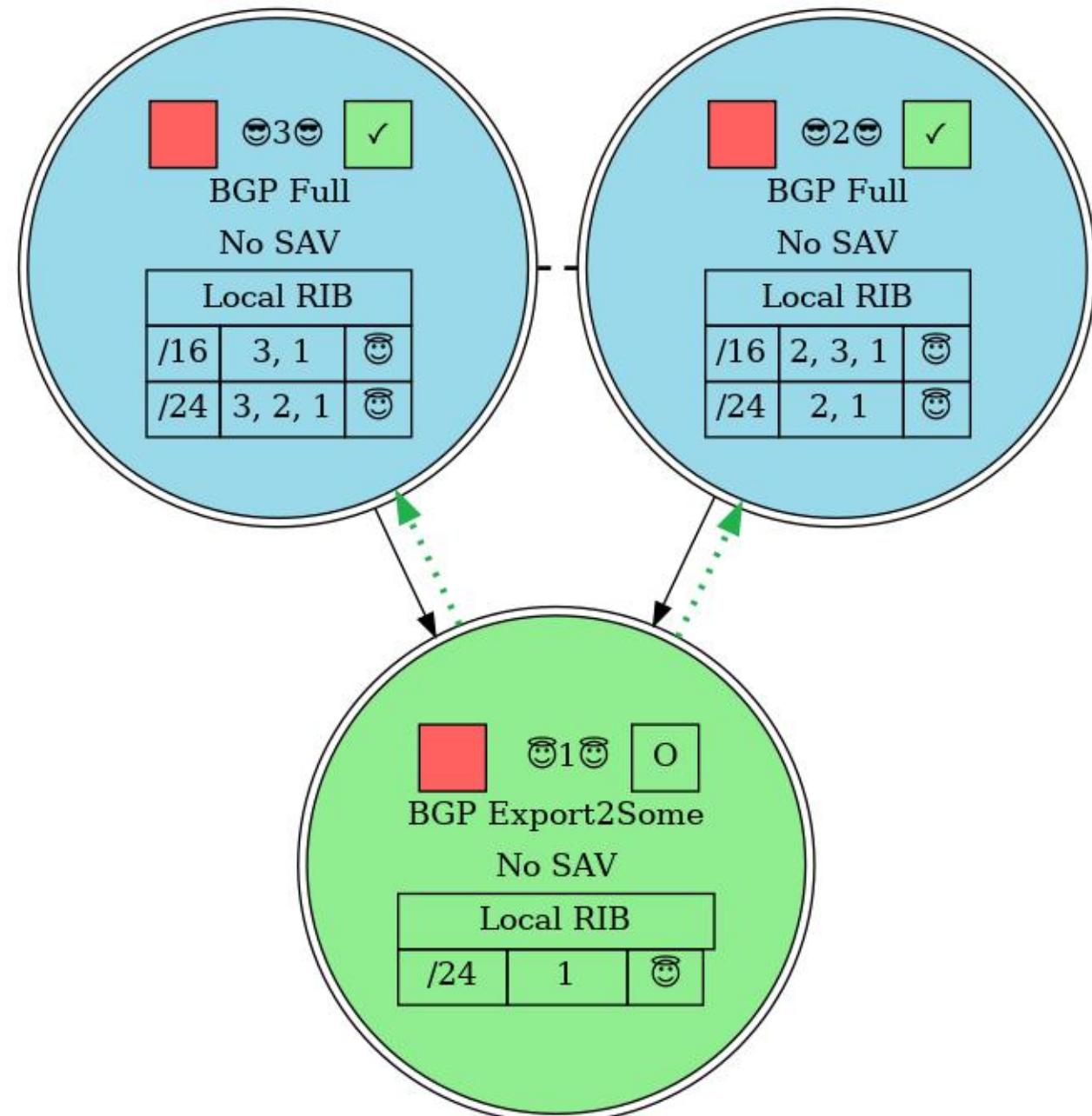
### (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0

(Victim Outcomes)

✓ TRUE NEGATIVE ✓	0
✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0



(config\_032 Ground Truth)  
Export2some w Replacement

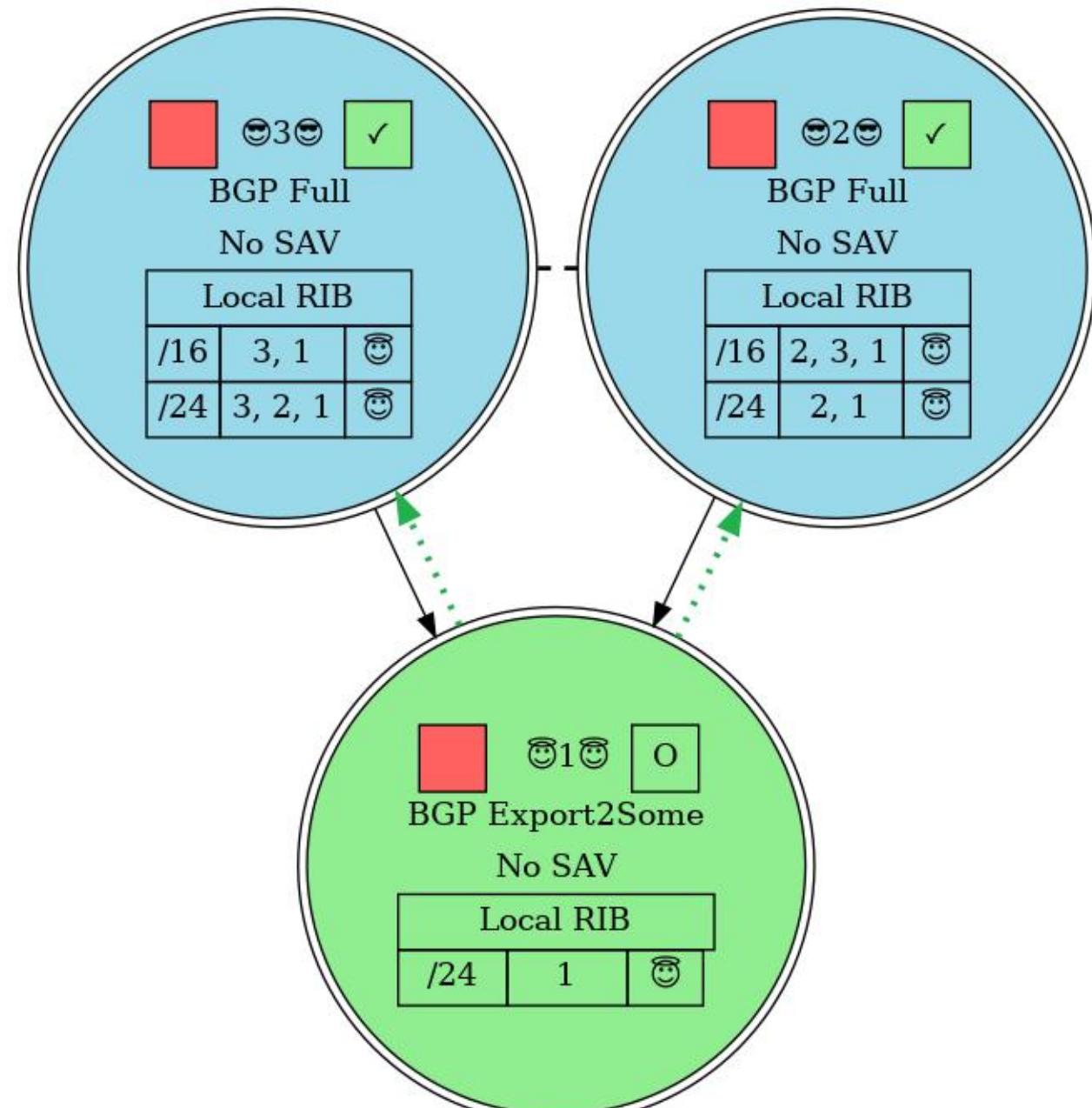
### (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0

(Victim Outcomes)

✓ TRUE NEGATIVE ✓	0
✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0



(config\_032)  
Export2some w Replacement

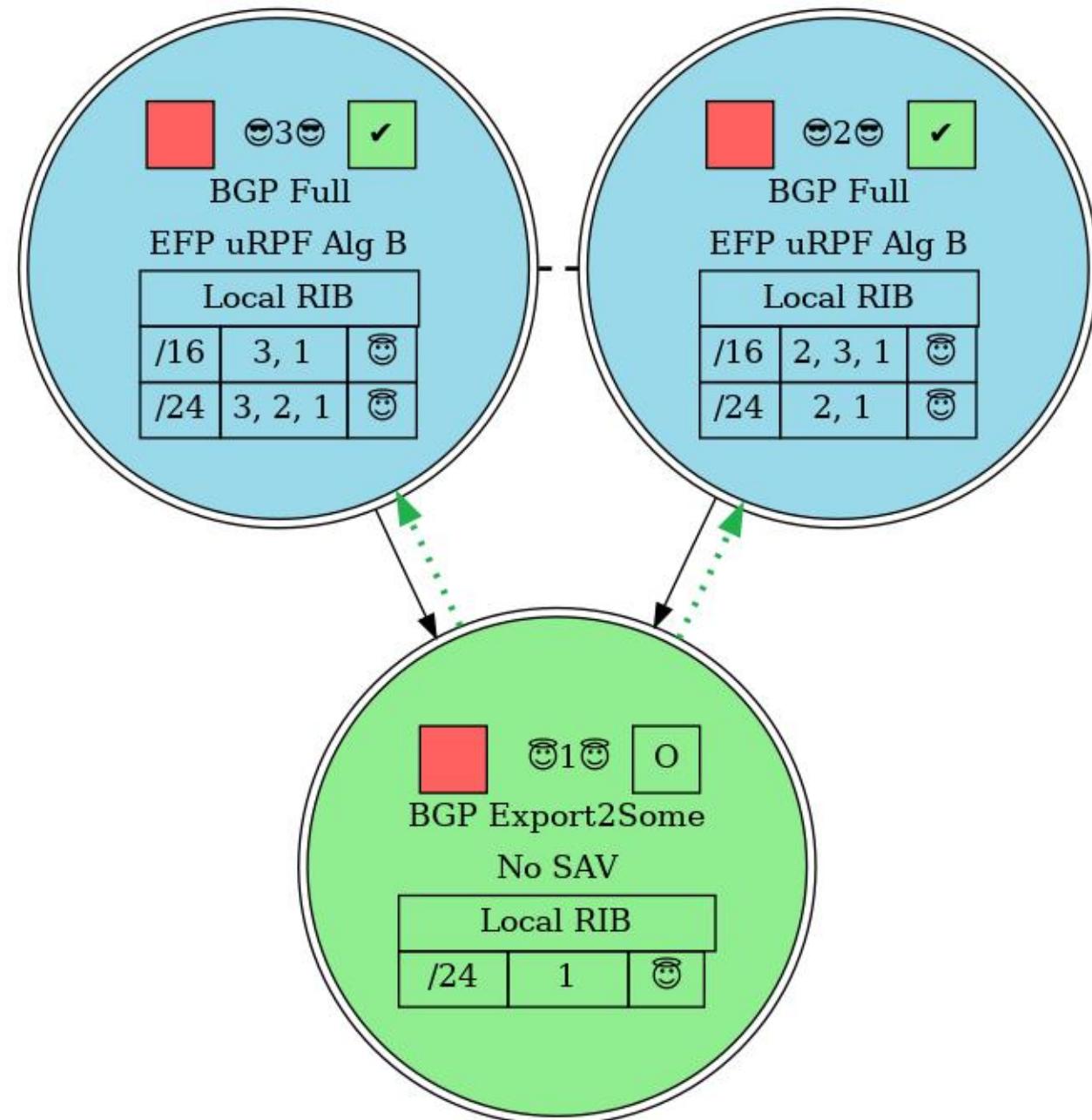
### (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓	0
✗ TRUE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0

(Victim Outcomes)

✓ TRUE NEGATIVE ✓	2
✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0



(config\_033 Ground Truth)  
EFP uRPF Alg B, Export2some w Replacement

### (Data Plane Outcomes)

(Attacker Outcomes)

✓ FALSE NEGATIVE ✓ 0

\* TRUE POSITIVE \* 0

✗ FILTERED ON PATH ✗ 0

⊥ DISCONNECTED ⊥ 0

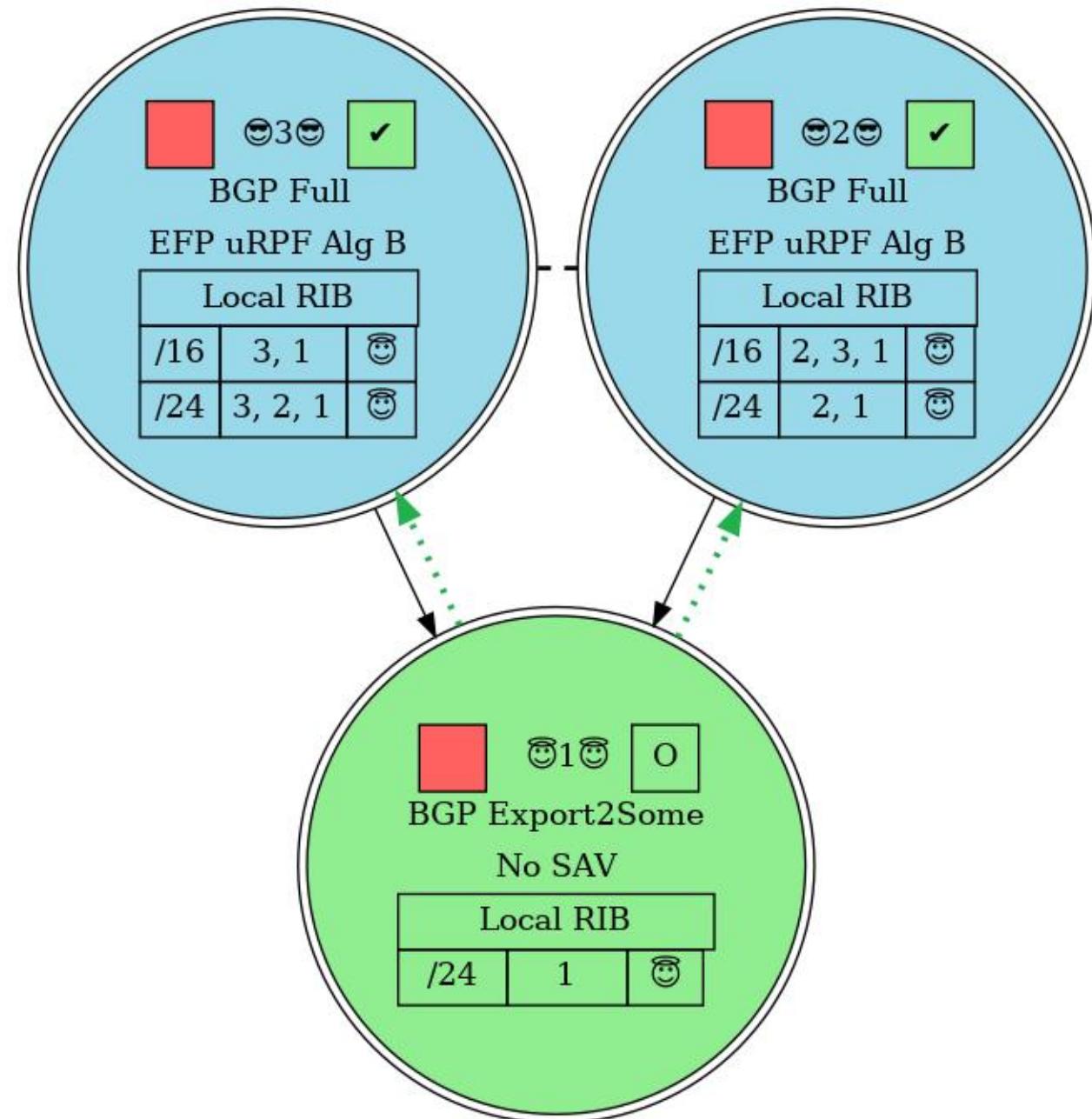
(Victim Outcomes)

✓ TRUE NEGATIVE ✓ 2

\* FALSE POSITIVE \* 0

✗ FILTERED ON PATH ✗ 0

⊥ DISCONNECTED ⊥ 0



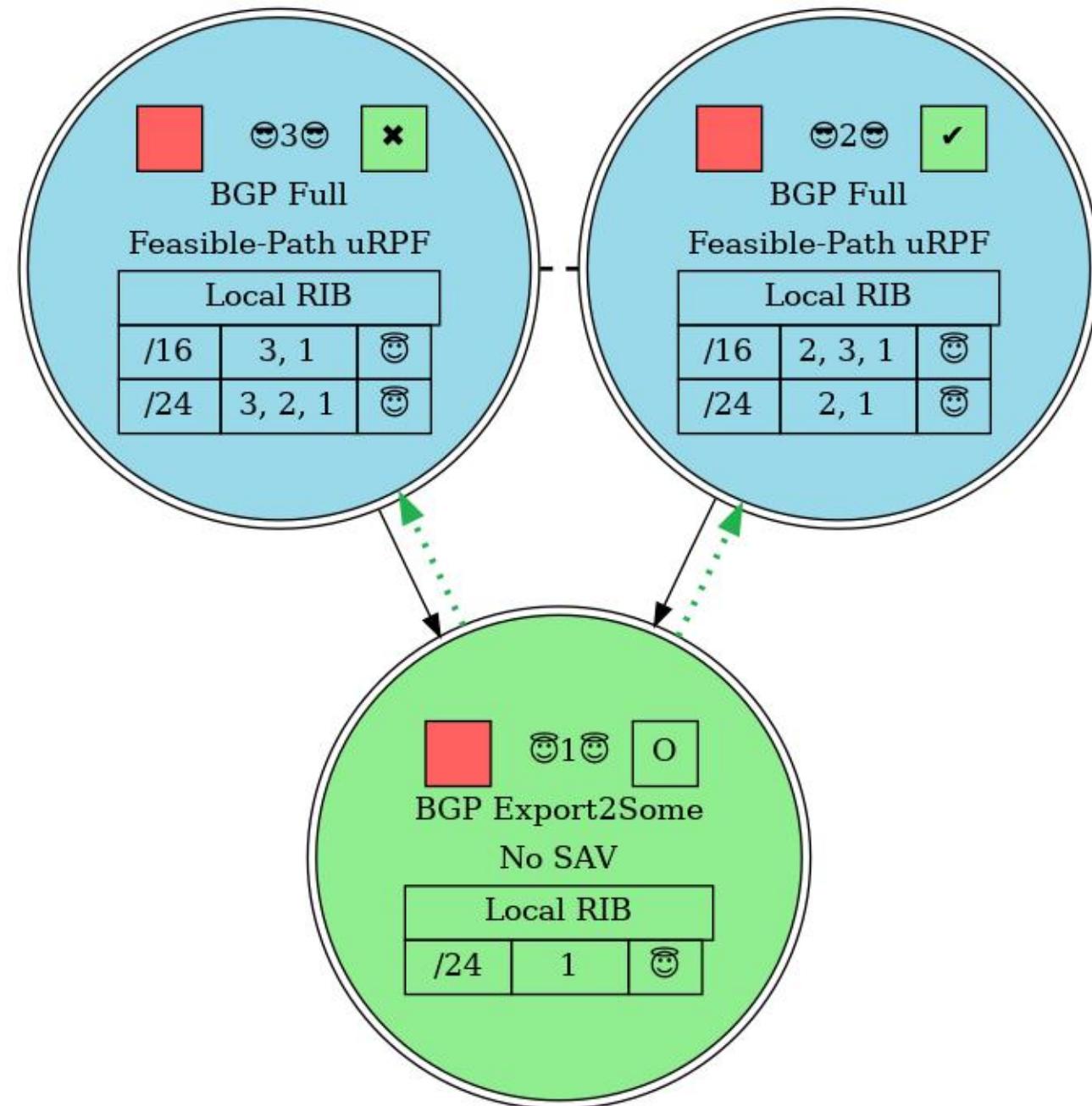
(config\_033)

EFP uRPF Alg B, Export2some w Replacement

### (Data Plane Outcomes)

(Attacker Outcomes)

		(Victim Outcomes)	
✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



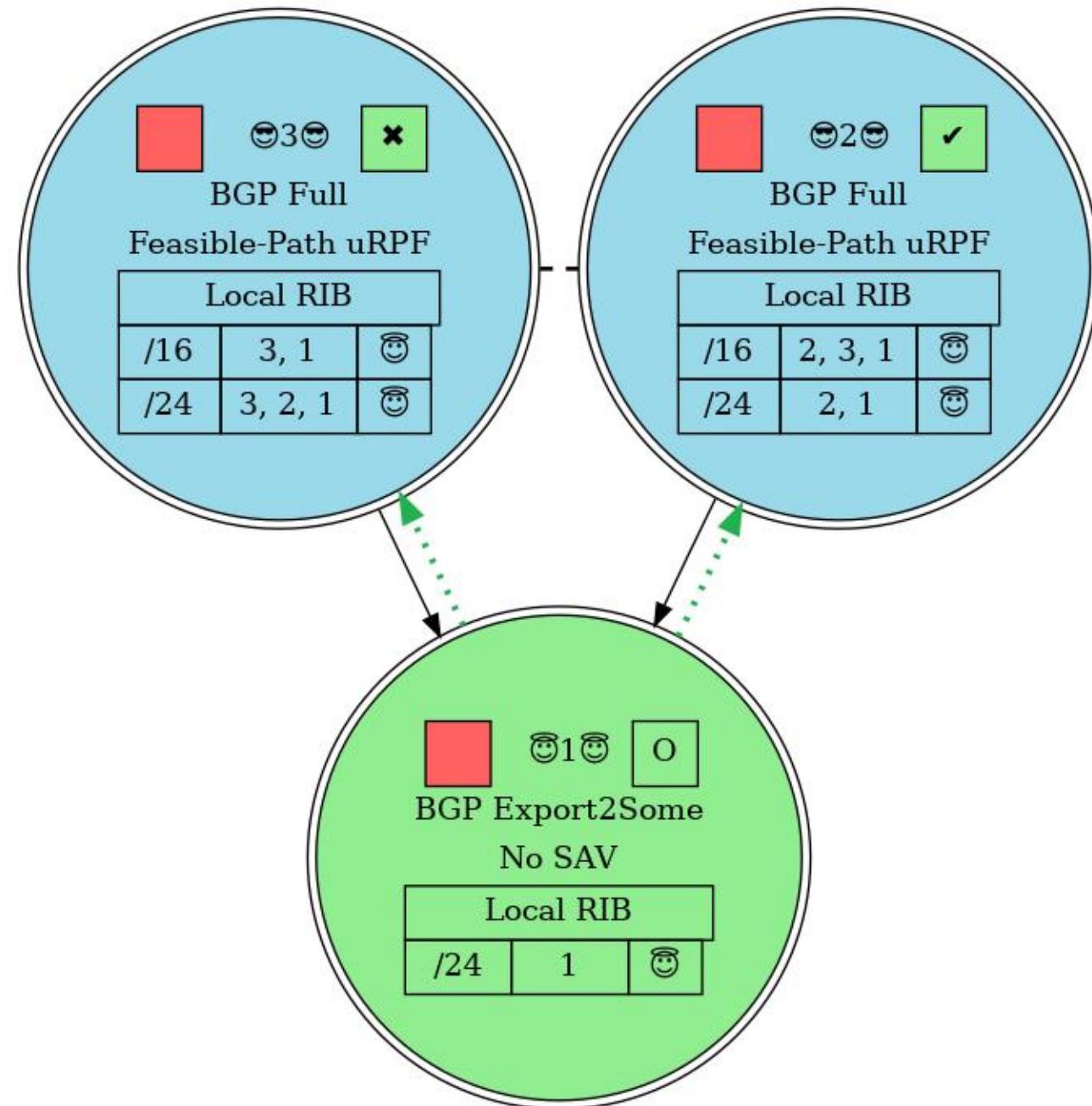
(config\_034 Ground Truth)  
Feasible Path uRPF, Export2some w Replacement

### (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

✓ FALSE NEGATIVE ✓	0	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	1
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



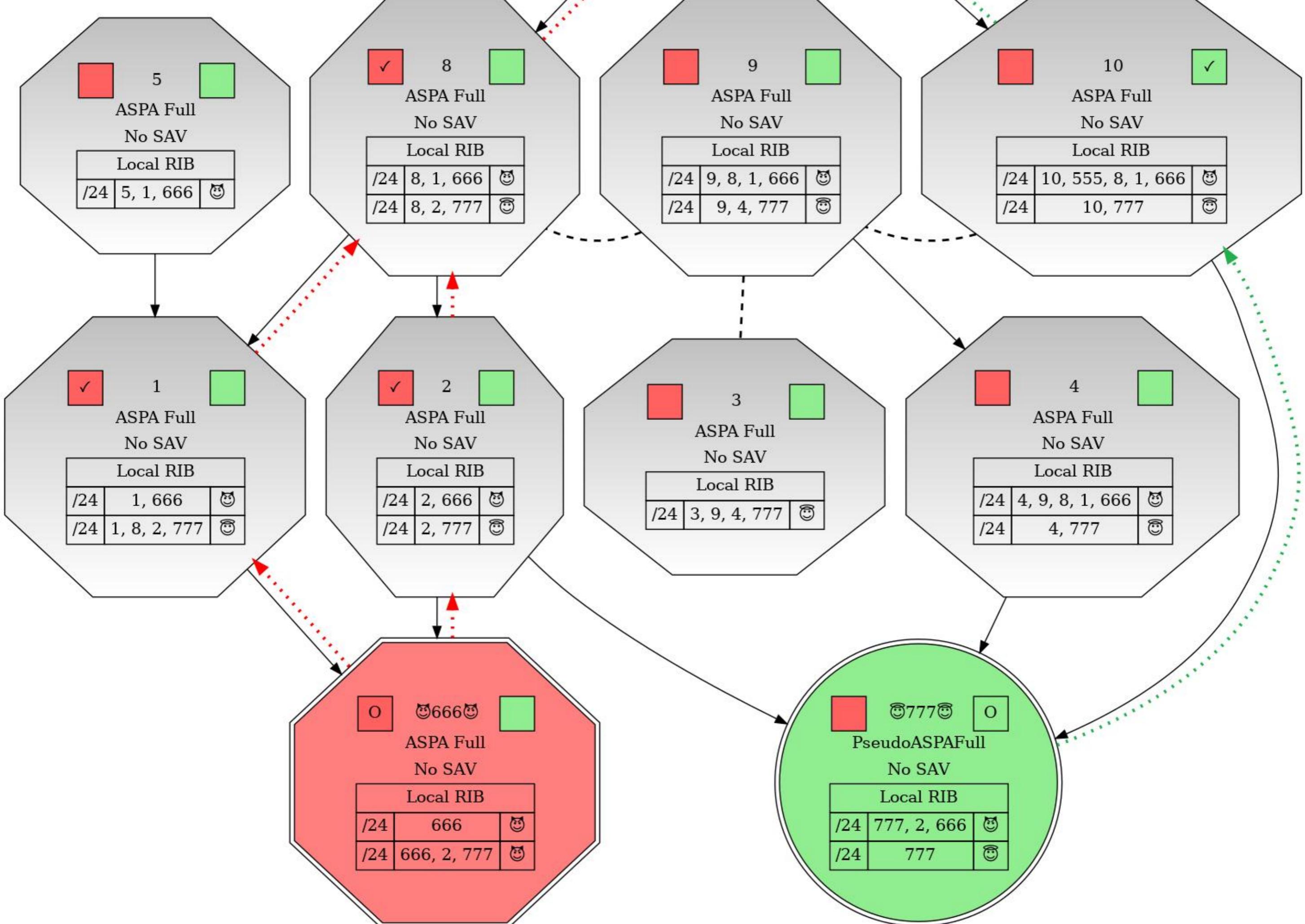
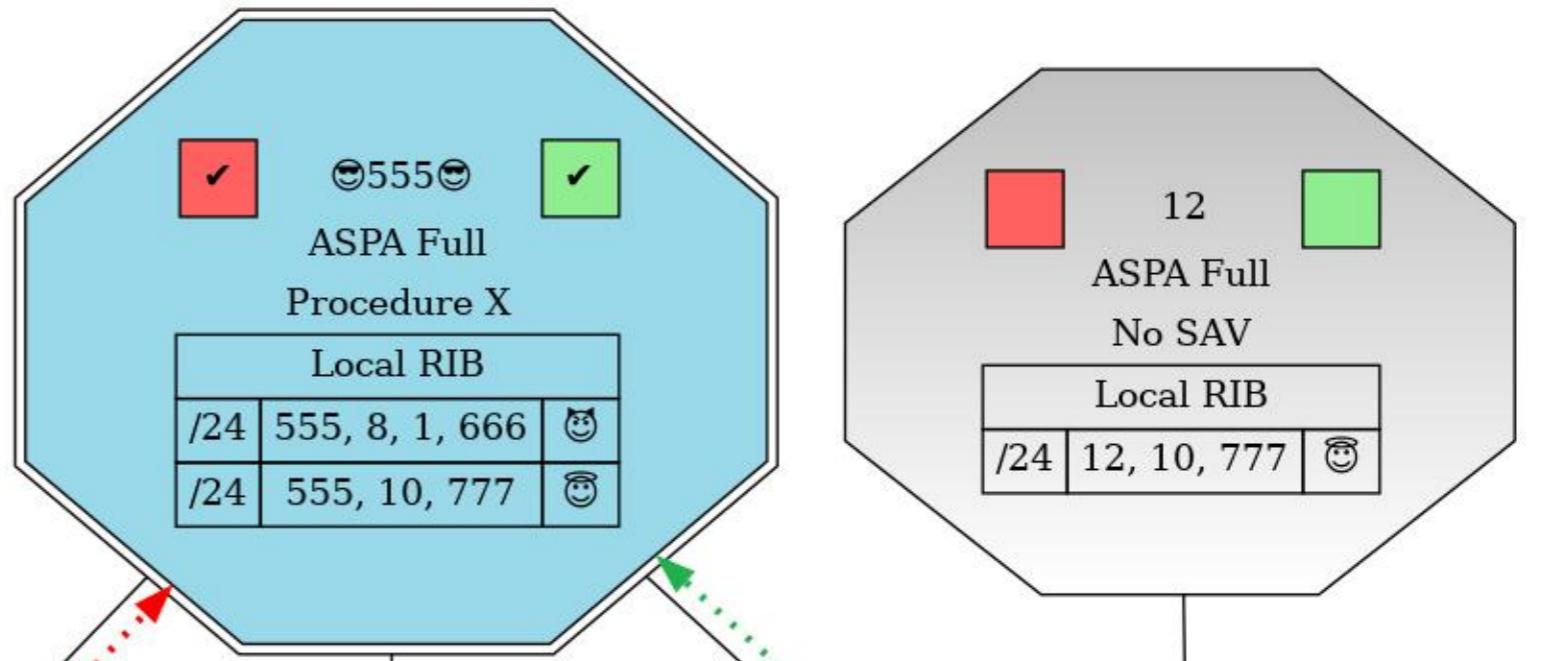
(config\_034)  
Feasible Path uRPF, Export2some w Replacement

### (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0



### (Data Plane Outcomes)

(Attacker Outcomes)

(Victim Outcomes)

✓ FALSE NEGATIVE ✓	1	✓ TRUE NEGATIVE ✓	1
✗ TRUE POSITIVE ✗	0	✗ FALSE POSITIVE ✗	0
✗ FILTERED ON PATH ✗	0	✗ FILTERED ON PATH ✗	0
⊥ DISCONNECTED ⊥	0	⊥ DISCONNECTED ⊥	0

